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ABSTRACT

Background information concerning the history, nature, and treatment of venereal diseases (VD) is given, and resources for further materials provided. Copies of legislation relating to VD education and control are given, and articles from several popular publications and magazines are reproduced. Charts and graphs illustrating the status of VD transmission as compared with other communicable diseases are also included. (LH)

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VENEREAL DISEASE

A Resource Guide

ED179519

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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in cooperation with

Iowa Department of Public Instruction

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ROBERT D. RAY
GOVERNOR

Office of the Governor

STATE CAPITOL
DES MOINES, IOWA 50319

Fellow Citizens:

The need for a thorough and effective information program concerning venereal disease is recognized by many Iowa citizens including educators, members of community organizations, as well as persons in the medical and health fields.

In order to meet this need, the Iowa State Department of Health, in cooperation with the Iowa Department of Public Instruction, has prepared this resource guide to assist those who are willing to inform others about venereal disease as a personal health threat and a community danger.

A venereal disease information and education program can be an important part of the total effort to curb this serious health problem. I encourage those public-minded people who have expressed a willingness to reach Iowans with the facts about venereal disease to use this guide, and I commend those of you who take part in this worthwhile endeavor.

Sincerely,

Robert D. Ray

Robert D. Ray
Governor

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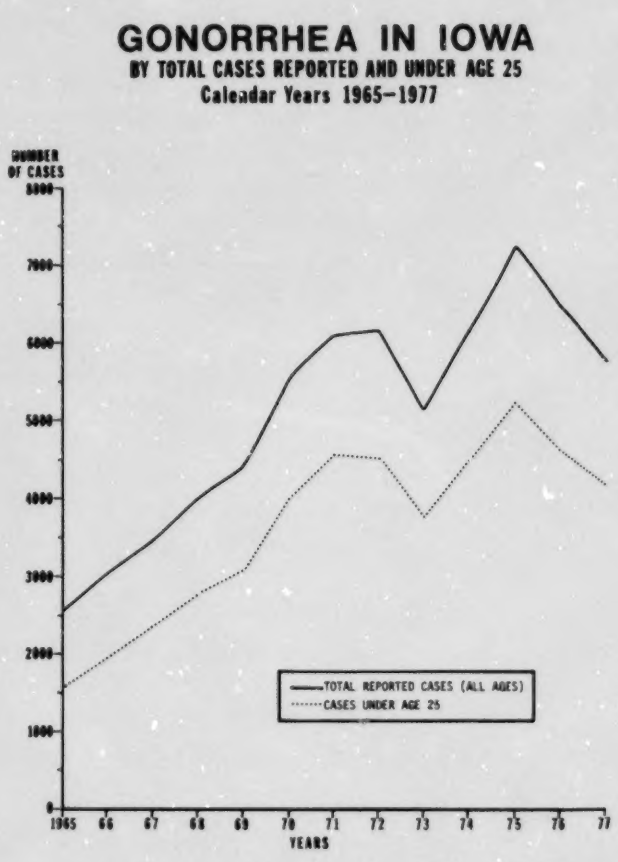
INTRODUCTION

Why Talk About Venereal Disease?

Iowa and the nation are in the midst of a venereal disease epidemic which is hitting hardest among young people under twenty-five years of age. In Iowa, at least 70 per cent of the reported cases of venereal disease occur in this younger age group. Gonorrhea alone is the most common reported communicable disease in the country. If as many cases of infectious hepatitis or rubella were reported, the people of Iowa would be aware of the problem and alarmed. Yet each year the number of cases of syphilis and gonorrhea increases by about 10 per cent, and the outcry is inaudible.



How can an epidemic of any serious disease persist when effective treatment is available? Obviously, the treatment has too often not reached those who are infected. One reason for this is that since these venereal diseases are transmitted by sexual contact, those who are infected or think they may be, are reluctant to seek assistance and discuss their concerns openly. Another factor is widespread lack of information about symptoms, transmission and treatment. Without the facts about venereal disease, an infected individual may not seek immediate medical attention.

Education about venereal disease can help by bringing those who are infected to sooner treatment which limits the opportunity for further spread of the disease. Open discussion about gonorrhea and syphilis should encourage young people to seek assistance or advice when they suspect a problem. A person who knows about the symptoms of venereal disease, where to go for help, and about confidentiality of treatment, is more likely to seek immediate medical attention when infected than one who does not. (However, if venereal disease education or information emphasizes guilt surrounding these diseases, the end result may work against disease eradication. Guilt does little to halt venereal diseases simply because it makes an infected person more secretive and more unwilling to seek diagnosis and treatment, which in turn works against others in the community who are also unaware of their own infections.)

How To Use The Venereal Disease Resource Guide

This resource guide provides information useful for lectures, classroom discussion, and presentations concerning venereal disease. Facts about modes of transmission, symptoms, effects, prevention, treatment and control of venereal disease are included, as well as lists of treatment centers and places to obtain help and information.

This is the factual material which an instructor or discussion leader may present to others. In addition, a section on the historical aspects of syphilis and gonorrhea is included for those who wish to incorporate information on venereal disease in a history class, or for those who wish to place venereal disease in a historical perspective.

Following the informational material is a section on "Teaching About Venereal Disease," which discusses approaches, objectives, and suggested classroom activities for teachers. Next is a section for those wishing to take an active role in combatting the venereal disease problem. Finally, a resource section presents materials and films available, a pre-test and post-test, and glossary of terms. Iowa and national statistics, the Iowa law pertaining to venereal disease, and article reprints of interest are included in an appendix.

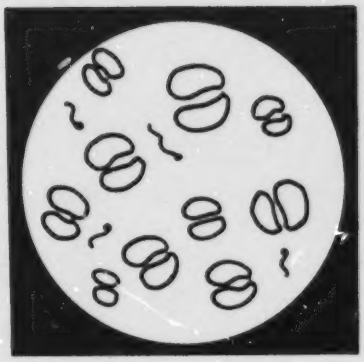
The primary objectives in presenting medical aspects of venereal disease to young people are to acquaint them with how syphilis and gonorrhea are transmitted, the symptoms, the consequences of untreated venereal disease, and the importance and ease of treatment. The long term behavioral objectives are to encourage young people to avoid infection, to recognize symptoms, to seek immediate medical attention if infected and to be responsible for the health of people they may have infected.

V.D. FACTS EVERYONE SHOULD KNOW

Gonorrhea and Syphilis Are Serious Communicable Diseases

Gonorrhea and syphilis are two different diseases, caused by different organisms and have different effects on the infected person's body. Their symptoms are different also. However, syphilis and gonorrhea are both **venereal** diseases, which means they are both transmitted through intimate sexual contact between an infected person and an uninfected person. The organisms for both syphilis and gonorrhea can live only in moist, warm environments and will not live more than seconds outside the body on objects such as doorknobs, dishes, toilet seats, towels, etc. Thus intimate sexual contact is the mode of transmission of venereal disease. (As with other communicable diseases, being exposed to the disease does not necessarily mean contraction of the disease.)

GONORRHEA



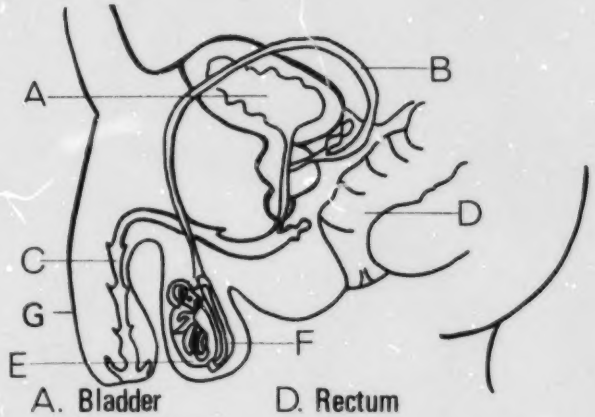
Gonorrhea is the most prevalent of the venereal diseases. It is in fact the most common reported communicable disease in the country — and is second only to the common cold in its prevalence.

The organism, a bacterium, which causes gonorrhea is known as **Neisseria gonorrhoeae** or as a "gonococcus." It lives and thrives in the mucous membrane linings of the body, such as the urethra, the vagina, the cervix (opening of the uterus), the mouth, the throat, or the rectum. (See diagrams of male genito-urinary tract and female pelvis.) The organisms are transmitted from an infected person to an uninfected person when the mucous membrane of one comes into contact with the mucous membrane of another person. (However, gonorrhea, in general, is not passed by kissing.) Occasionally the organisms may spread from the reproductive organs or urinary tract and cause serious complications in the rest of the body.

Symptoms In The Male

In the male, the gonorrhea organisms usually attack the mucous membrane lining of the urethra, the passage running through the penis (see diagram of the male genito-urinary tract.) The male will not notice right away that he is infected, although the organisms are there and are multiplying. This period of time after infection and before the symptoms of the disease appear is called the incubation period. Within a few days after infection — usually between two and eight days — the male sometimes will notice a yellowish-white discharge from his penis and also a painful burning sensation upon urination. (These symptoms could also appear as late as several weeks after the disease is acquired.) This discharge is composed of dead white blood cells which have been trying to combat the invading gonorrhea organisms plus dead cells from the lining of the urethra.

MALE GENITO-URINARY TRACT



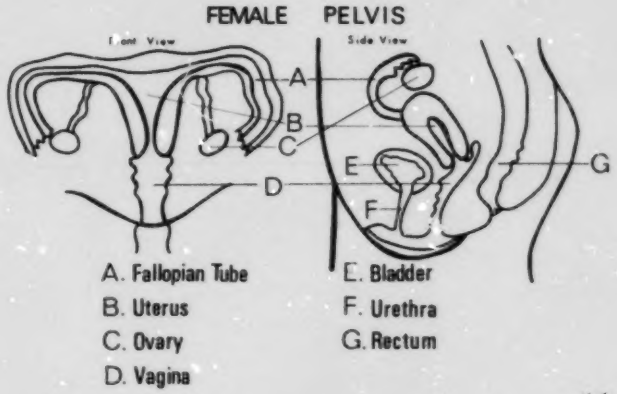
A. Bladder
B. Vas deferens
C. Urethra
D. Rectum
E. Testis
F. Epididymis
G. Penis

The male who has gonorrhea can pass the disease at any time (even during the incubation period) to other individuals through intimate sexual contact. He is **infectious**.

Symptoms In The Female

When discussing gonorrhea in females (and in some males) one necessarily discusses **asymptomatic** (without symptoms) gonorrhea. Seventy to eighty percent of females who have gonorrhea may have no symptoms of the disease's presence. These persons are said to be asymptomatic, but they are carrying the disease and the organisms are attacking the mucous membrane linings of the infected area of their bodies.

One reason that women often have no symptoms is that the organism attacks the mucous membrane lining of the cervix or the vagina. While the organism is in the cervix the female usually will feel no pain, and the amount of discharge which a man might notice may not be noticed or may be considered normal by a woman. The female may not realize she has gonorrhea for several weeks, and may feel perfectly healthy. However, she is infectious and can spread the disease by sexual contact.



If a female does have early symptoms, they are similar to the male's symptoms; that is, there may be a discharge, or there may be pain on urination (if the organism does invade the female's urethra). If the infection starts to spread from the cervix through the uterus to the fallopian tubes, the woman may experience fever, nausea, vomiting, and abdominal pain.

The symptomatic person has the advantage over the asymptomatic person because of the greater likelihood of early detection and treatment.

Complications

If an individual with gonorrhea is not diagnosed and treated, complications may begin. Sterility may result in both men and women.

In the female, an egg is released from one of the ovaries each month and travels through the fallopian tube to the uterus. A sperm from a male can swim up through the uterus into the fallopian tube and can fertilize the released egg while it is still in the tube. The fertilized egg would continue its journey and implant itself in the uterine wall for a normal pregnancy. But gonorrhea organisms can pass from the cervix up into the fallopian tubes and attack the tissue there. The scar tissue which results can completely block both tubes making it impossible for an egg to travel to the uterus and impossible for a sperm to travel through the tube to fertilize the egg. When this happens, the female is sterile.

If the fallopian tubes are partially closed by scar tissue caused by the gonorrhea organism, it is possible for a sperm cell to get through the tube and fertilize a released egg,

since a sperm cell is many times smaller than an egg. But the blockage prevents the egg from continuing on its journey and implanting itself in the uterine wall as is necessary for a normal pregnancy. The fertilized egg continues to develop in the fallopian tube. This is called an "ectopic" or "tubal" pregnancy. The developing fertilized egg will grow enough to rupture the tube, which is a very serious situation.

The most common complication in the female is pelvic inflammatory disease (P.I.D.). P.I.D. is any inflammation of the tissues of the reproductive organs such as the fallopian tubes or the uterus.

Because gonorrhea first attacks the urinary tract in the male, his first complications are usually associated with the urethra and the bladder. The scarring that results from the gonorrhea germs attacking the urethra may leave this tube partially or completely closed by scar tissue. Such a stricture may make it difficult or impossible for the male to urinate.

The male could also become sterile. In some males, gonorrhea will spread from the urethra to the prostate gland and cause an abscess which is extremely painful. If untreated the gonococcus will pass down the vas deferens (tube from prostate to testicles) to the epididymis on one or both testicles (see diagram of male genito-urinary tract). The infection causes swelling and pain in the groin. If the epididymis of both testicles is infected, the male could become sterile, although this rarely happens. The scar tissue may totally block the passage of sperm out of the testicles.

Gonorrhea may be treated at any time during the infection. But the damage and scarring that the infection has done are irreversible in most cases. (A stricture of the urethra can sometimes be opened.)

There are other possible complications besides sterility. Occasionally the organism of gonorrhea is carried by the blood stream from the reproductive parts and organs to other areas of the body. One common place for the organism to settle is in the joints, causing a very painful form of arthritis to occur. Less commonly, the organism of gonorrhea may cause meningitis or heart disease. None of the complications of gonorrhea need occur if the infected individual consults a doctor for diagnosis and treatment. Anyone suspecting gonorrhea should ask a doctor to do a laboratory test for gonorrhea. Gonorrhea can be cured, and the sooner it is treated, the better.

One other complication of gonorrhea which should be mentioned is the infection of the eye. If a pregnant woman has gonorrhea at the time she delivers her child, the disease organisms may infect the child's eyes as it passes through the mother's birth canal. Blindness could result. Because of this danger, most states, including Iowa, require that preventative drops of silver nitrate medication or an antibiotic be placed in the eyes of every newborn child. Also, an adult could infect his or her own eyes by hand-to-eye transmission of gonorrhea germs.

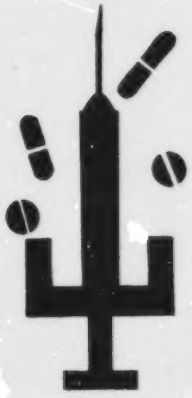
Laboratory Tests For Gonorrhea

The laboratory tests for gonorrhea are done with specimens of the patient's discharge taken from the penis, cervix, or other infected organs. One test, the "gonorrhea smear," involves examining the discharge under a microscope for evidence of the gonococcus. A more reliable test is the "gonorrhea culture." In this test, the specimen is placed on a substance which contains food for its growth (culture medium) and allowed to grow so that identification is possible. If a colony of gonococcus bacteria is produced then

the test is "positive," indicating that the patient has gonorrhea.

An infection of gonorrhea in the penis of the male usually leaves little doubt of its presence; there is pain and a discharge to warn the patient. An infection of gonorrhea in the throat, rectum, or vagina, on the other hand, is very difficult to diagnose without the aid of laboratory tests. It is very important for those who think they have been exposed to gonorrhea to tell their doctors about their suspicions or ask the doctors to do a laboratory test for gonorrhea. There is no reliable blood test for gonorrhea at present.

Diagnosis And Treatment Of Gonorrhea



Gonorrhea is treated with large doses of antibiotics. The treatment for gonorrhea must be done by a physician. Only a doctor has access to the proper medication, and more importantly, only he knows how much to give. Persons who attempt to treat themselves usually succeed only in complicating their problem by not killing all the disease organisms, yet hiding the symptoms.

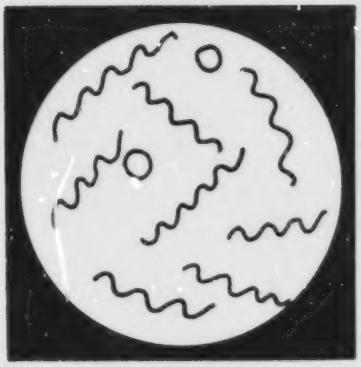
A male who has a discharge and feels discomfort when he urinates will probably go to a doctor for treatment because of the pain involved. A female or an asymptomatic male who is told that he or she may have infected someone or be infected is likely to see a doctor as well. But a person who has no symptoms and is not told that he or she may have been exposed to the disease, may go untreated until problems develop. Thus it is clear that telling sexual partners of their possible infection is important.

Even if people are told they may be infected with gonorrhea and see a physician, they may not tell the doctor that they have been exposed to the disease. A routine physical examination does not necessarily reveal the existence of the disease. It is very important that the doctor know what the possibilities are, and be told of the exposure to gonorrhea. The physician should also be told the nature of the sexual contact.

Another important point to remember is that waiting for symptoms to occur serves no purpose. Not only is the exposed individual risking damage to his or her body, but also taking the chance of infecting others. This is why individuals who have been exposed to known cases of gonorrhea are often given treatment before any noticeable symptoms occur.

Finally, it is important to remember that anyone can have gonorrhea more than once. Having gonorrhea does not mean that the infected person will be immune in the future. He or she could get it time after time — and each time could mean more damage.

SYPHILIS



Syphilis, unlike gonorrhea, is a **systemic** disease, which means that the causative organisms get into the circulatory system — both the blood stream and the lymphatic (disease defense) system. Syphilis has been called "the great imitator" since it may look like so many other diseases to those infected and to doctors. Because of its similarity to other diseases and because syphilis often produces painless signs, it is important to know how to recognize some of the early symptoms.

The name of the organism which causes syphilis is **Treponema pallidum**, a cork-screw shaped organism that cannot live outside the body for more than a few minutes. It is also referred to as a spirochete (pronounced spiro-keet). This spirochete usually enters the body through a microscopic break in the skin or through the mucous membrane linings of the body. Syphilis is transmitted from one person to another by direct contact with an infectious lesion (sore) or it can be transferred from an infected woman to her unborn child in utero (in the womb). If a lesion is on the mouth, syphilis could be transmitted by kissing although this rarely occurs. Because the spirochetes need the same conditions as the gonorrhea organisms, such as moisture, darkness, warmth and food, the kinds of sexual contact which transmit gonorrhea are also the most common modes of transmission of syphilis.

Syphilis manifests itself in different ways at different times in the infected individual. These distinct phases of the disease are thus separated into stages: primary, secondary, latent (hidden), and late (complicated). If an infant is infected before birth it is said to have "congenital syphilis."

Effective Contact	Incubation 10-90 Days (Average 3 Weeks)	**Primary** Duration 1-6 Weeks	Period of Latency 2-10 Weeks	**Secondary** Duration 3-6 Weeks	Period of Latency	**Secondary Relapse**	Period of Latency	Late
Transmission is the result of direct contact with an infectious lesion, usually during sexual intercourse.	Incubation. No signs or symptoms. STS nonreactive.	STS may be nonreactive for a week or longer after appearance of chancre, then becomes reactive.	Periods of latency. No signs or symptoms. STS reactive. 1/3 of patients have no period of latency.	Secondary eruption may vary greatly in appearance and may or may not be conspicuous. 20-25% of patients will have minimal or atypical lesions. STS reactive.	Early latency: for purposes of epidemiology, under one year's duration. History of probable primary or secondary manifestations. STS reactive.	Secondary relapse: 23.6% of patients will relapse, most within the first year of infection. Of these 18.9% will have a second relapse, 3.3% a third relapse.[1]	No true line may be drawn between Early Latent and Late Latent syphilis. The disease is a continuum and its progress depends largely on the individual.	Late syphilitic lesions are chronic and destructive. As a rule, *Treponema pallidum* cannot be demonstrated from these lesions by dark-field examination.
EXPOSURE	INCUBATION	PRIMARY	LATENCY	SECONDARY	LATENCY	SECONDARY RELAPSE		

[1] Gjestland, T. "The Oslo Study of Untreated Syphilis." *Acta Dermato-Venereologica*, (1955)

The course of syphilis begins with exposure and lasts until effective treatment or death, except for a few rare cases of spontaneous cure.

Primary (First) Stage

The spirochetes may enter the blood stream and lymph system in a matter of hours

after a person has been exposed by sexual contact to a person with the disease. Once in the system, the spirochetes multiply very rapidly, but the infected person will not notice any signs of the disease for several weeks. This is called the incubation period. After an incubation period of three or four weeks (or as few as ten days to as many as ninety days), an open, usually painless sore called a chancre (pronounced shan-ker) will appear at the point where the organisms first entered the body, usually on the genitals, but sometimes on the mouth. Because the chancre is painless, it may go unnoticed, especially if hidden from view. The appearance of the chancre marks the beginning of the primary stage. It lasts from one to five weeks and will disappear even without treatment. However, if an infected person is not treated for syphilis, he or she certainly still has the disease even though this sign disappears. During the primary stage, a person is infectious to others because the chancre is teeming with spirochetes, the causative organisms of syphilis. The disease can be transmitted by direct contact with this chancre.

Secondary (Second) Stage

About six weeks after the spirochetes entered the body (or as few as two weeks to as many as six months), a generalized or localized skin rash may appear. This rash marks the beginning of the secondary stage and varies greatly in its appearance. It may cover the entire body or only parts of it, such as the palms of the hands or soles of the feet. Patches of hair might fall out due to rash on the scalp, and there is occasionally a low fever or sore throat.

In some cases, the secondary stage appears before the primary chancre has disappeared. In other cases it may be so minimal and transient that it is never apparent to the eye. Many people who have syphilis do not know it. Like the chancre in the primary stage, the secondary symptoms will go away without treatment. But even when there are no signs of the disease, the causative organisms are active in the body unless the disease is treated. The secondary rash is also infectious because the spirochetes are again on the surface. They are present in the rash sores, and can be passed by direct bodily contact, usually sexual.

About twenty-five percent of the secondary cases which are not treated will have at least one reappearance of the secondary rash after the initial disappearance.

Latent (Hidden) Syphilis

By definition, latent syphilis is that stage of syphilis during which there are no clinical signs or symptoms of the disease. All syphilis is latent at some time during its course, and some cases may be virtually latent for the duration of the disease or the life of the patient.

Since there are no sores present during latency, a patient during this stage is not infectious. The only exception is that a pregnant woman can transmit the spirochetes to her unborn child via the placenta. (See diagram of female pelvis.).

Late Syphilis — Complications

It is during the late stage of syphilis that serious complications occur. Approximately one-third of the people with untreated syphilis will develop late destructive lesions of syphilis (which are not infectious to others), and up to twenty-three percent of the entire

group can be expected to die from the disease. Unfortunately, there is no known means of predicting which patients will develop the complications of late syphilis and which will not.

It usually requires from five to fifteen or more years for late syphilis to progress to the point where symptoms of this stage of the disease are apparent. By this time, a certain amount of irreversible damage will have occurred. The late lesions are always destructive. Late syphilis may damage the heart and large blood vessels. The central nervous system may be affected in a variety of ways: insanity, abnormal movement (due to nerve damage), blindness, crippling and paralysis. Destructive ulcers called "gummas" may develop in almost any of the organs or tissues of the body. Heart and blood vessel complications account for eighty percent of the deaths due to syphilis. The majority of remaining deaths are due to destruction of the central nervous system.

The destructive lesions of late syphilis are not infectious. However, a woman with late syphilis may infect her unborn child.

Congenital (Infected Before Birth) Syphilis

After the eighteenth week of pregnancy, the spirochete of syphilis is able to cross the placenta and infect the fetus (unborn child). Adequate treatment of the mother before the eighteenth week of pregnancy prevents infection of the fetus. Treatment of the mother after the eighteenth week arrests the infection and may result in cure of the child depending on the amount of elapsed time. A mother who goes totally untreated may deliver a still-born (dead) child.

Congenital syphilis can be divided into early and late stages. Early congenital syphilis is defined as being of less than two years duration. During this period there may be infectious lesions (sores) of the skin and mucous membranes, deformation of the bones and inflammation of the cartilage, anemia, enlargement of the spleen and liver, and central nervous system involvement.

Late congenital syphilis is defined as congenital syphilis which has persisted two years or more. The manifestations may include blindness, misshapen teeth, deafness, insanity, paralysis, deformed bones and joints, and lesions of the heart. Late congenital syphilis is not infectious.

Laboratory Tests For Syphilis

The blood tests (serologies) used to diagnose syphilis react to the presence of certain antibodies in the patient's blood, not to the presence of the actual syphilis spirochete. The patient manufactures these antibodies as defense against the syphilis spirochete but the defense is not adequate to cure the disease.

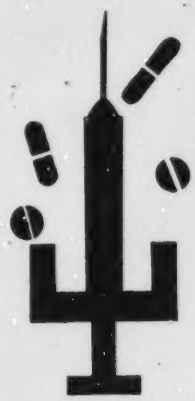
Blood tests for syphilis will usually not react to the patient's antibodies until the primary lesion, or chancre, has been present for one or two weeks. Tests of blood taken before the appearance of the chancre will usually show the patient to be "non-reactive" or normal even

though the spirochetes are present and multiplying. Once the blood test is positive or "reactive," it will remain so throughout the course of the disease until cure. When a patient has been cured of early syphilis, his blood tests will usually return to normal within a few months or a year. The longer the duration of the infection before treatment, the longer it takes to produce a normal blood result following treatment. A patient treated for late syphilis, on the other hand, may take several years to produce a normal blood test if it returns to non-reactive at all. The lag between treatment and non-reactive test results does not mean that the patient has not been cured. The tests are reacting to antibodies that remain in the body even though the spirochetes have been killed. Some patients have a reactive blood test for the rest of their lives even though they have been completely cured.

There is another test for syphilis, which can be used when lesions are present — either a primary chancre or a lesion of a secondary rash. This is the "darkfield microscope" examination, and is done on a special microscope which prevents direct rays of light from entering the microscope. When an object is present on the slide, the light is reflected into the microscope. Such an object would appear white on a black background.

The darkfield examination is done by obtaining a specimen from the lesion and placing it on a slide under the microscope. If a spirochete characteristic of **Treponema pallidum** is observed this constitutes a positive diagnosis of syphilis. A negative darkfield examination does not exclude the possibility of syphilis.

Treatment of Syphilis



The organism which causes syphilis can be destroyed during any stage of the disease. Cure can be achieved by treatment with one of several antibiotics. Treatment is given on an out-patient basis, usually in one to three visits. Self-treatment by patients is a very dangerous practice which usually results in masking of early symptoms and the appearance many years later of destructive lesions.

Early syphilis can be cured without residual damage since the lesions involved are not destructive. Late syphilis can be treated, but whatever tissue damage has occurred before treatment begins cannot be undone by drugs. Similarly, the earlier that congenital syphilis is treated, the lesser the chance there will be permanent damage.

An Ounce Of Prevention

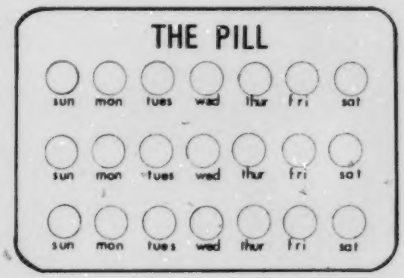
There is obviously only one sure way to prevent contracting a venereal disease; that is, by having no sexual contact or limiting contact to one person who also limits contact to one person. The more one limits his or her sexual contacts, the more likely he or she will remain free of syphilis and gonorrhea. Clearly, the converse is true also.

The condom (prophylactic), used by a man, is a method which helps prevent infection from a venereal disease — if used properly. It is perhaps the best preventative device which is readily available. Also, washing after sexual contact, and urinating before and after contact, will destroy germs and is a preventative measure. But these are not always adequate methods.

There is no evidence today that douching with commercial solutions prevents or arrests venereal disease infections. Vaginal foams and creams which are marketed as contraceptives probably also are ineffective, according to the best evidence available.

Facts Versus Fictions

The following are important facts about venereal diseases which are commonly misunderstood.



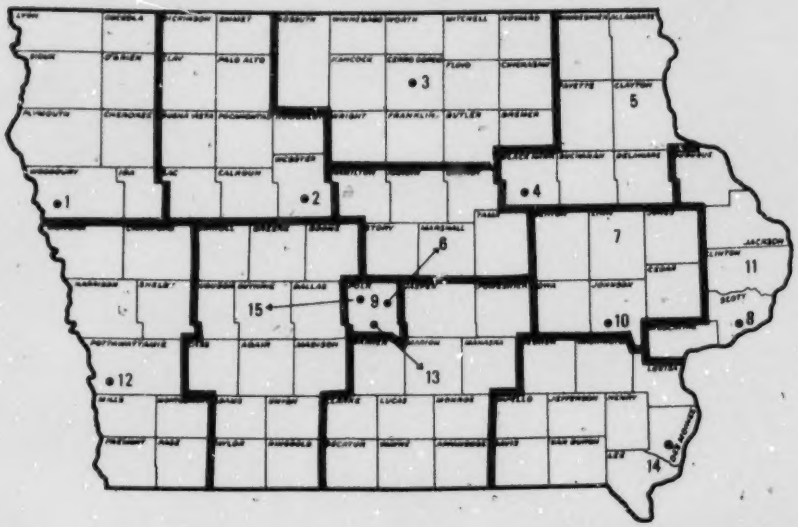
1. Birth control prevents conception, not venereal disease. The condom is the only birth control device which may help prevent syphilis and gonorrhea. A woman who takes birth control pills is more likely to catch gonorrhea from an infected man than is a woman who does not take pills.
2. Both syphilis and gonorrhea are spread through homosexual as well as heterosexual contact.
3. Disappearance of the signs and symptoms of syphilis and gonorrhea without treatment is not an indication that the disease has disappeared.
4. People don't get venereal disease from door knobs, toilet seats, cups, towels, or similar objects.
5. A person who has had syphilis or gonorrhea, can catch either disease again and again. There is no built up immunity.
6. There is no reliable blood test for gonorrhea at present.
7. Venereal disease can be passed by oral-genital contact.
8. Venereal disease is seldom passed by kissing. It can be if lesions of syphilis are in the mouth.

Where To Go For Help With A Venereal Disease Problem

A person with gonorrhea or syphilis should go to a clinic or a private doctor for treatment and cure. The state and local health departments, a public health nurse or a school nurse usually can answer questions a person may have about where to go and how to get help. In Iowa, if an individual with venereal disease cannot pay for his or her treatment, the state department of health can provide assistance. In such cases, the public health representative in each of twelve areas of the state or the state department of health should be contacted. (See list of those who can help on the following page.) The public health representative for venereal disease control is specifically trained to deal with venereal disease problems, and he spends most of his time in such work. Everything is kept private and confidential, and only the treating physician need know of a possible infection. By law, names of all persons with a venereal disease are kept completely private and are not released to anyone.

LOCATION OF VENEREAL DISEASE PUBLIC HEALTH REPRESENTATIVES

The venereal disease public health representative is specially trained in venereal disease follow-up and control, and can help with problems concerning venereal disease in his area. The representative for each respective area can be reached at the following offices. Anyone with a problem is encouraged to call his or her representative – collect if necessary. Also inquiries may be directed to: Iowa State Department of Health, Venereal Disease Control Section, Robert Lucas Office Building, Des Moines, Iowa 50319. Phone (515) 281-3031. If any of the regional representatives cannot be reached, contact the Iowa State Department of Health.



1. City Health Department
   411 Seventh Street
   Sioux City, Iowa 51101
   (712) 279-6119

2. Iowa State Department of Health
   720 S. 17th Street
   Fort Dodge, Iowa 50501
   (515) 955-6314

3. Regional Health Service II
   1450 North Federal Avenue
   Mason City, Iowa 50401
   (515) 424-4073

4. Black Hawk County Health Department
   1407 Independence Avenue
   Fifth Floor
   Waterloo, Iowa 50703
   (319) 291-2417

5. Black Hawk County Health Department
   1407 Independence Avenue
   Fifth Floor
   Waterloo, Iowa 50703
   (319) 291-2417

6. Iowa State Department of Health
   Lucas State Office Building
   Des Moines, Iowa 50319
   (515) 281-4931

7. Linn County Health Department
   751 Center Point Road, N.E.
   Cedar Rapids, Iowa 52402
   (319) 398-3551

8. Scott County Health Department
   Court House Annex
   Davenport, Iowa 52800
   (319) 326-8618

9. Polk County Health Department
   East 1st & Des Moines Streets
   Des Moines, Iowa 50307
   (515) 283-4964

10. Johnson County Health Department
    538 S[illegible]n Gilbert
    Second Floor
    Iowa City, Iowa 52240
    (319) 351-3085

11. Scott County Health Department
    Court House Annex
    Davenport, Iowa 52800
    (319) 326-8618

12. Council Bluffs City Health Department
    209 Pearl Street
    Council Bluffs, Iowa 51501
    (712) 328-3195

13. Iowa State Department of Health
    Lucas State Office Building
    Des Moines, Iowa 50319
    (515) 281-4932

14. Des Moines County Health Center
    522 North Third
    Burlington, Iowa 52601
    (319) 752-4561 Ext. 21

15. Iowa State Department of Health
    Lucas State Office Building
    Des Moines, Iowa 50319
    (515) 281-4932

LOCATION OF V.D. TREATMENT FACILITIES IN IOWA

BURLINGTON
Clinic:
Des Moines County Health Center
522 North Third
(319) 752-4561
Hrs.: 8:00 am - 5:00 pm
Monday thru Friday

CEDAR RAPIDS
Clinic:
St. Luke's Methodist Hospital
Outpatient Department
1026 Avenue "A" N.E.
(319) 398-7122
Hrs: 7:00 am - 5:00 pm
Monday thru Friday

Mercy Hospital
Outpatient Department
701 Tenth
(319) 398-6011
Hrs: 8:30 am - 5:00 pm
Monday thru Friday

COUNCIL BLUFFS
Clinic:
Cogley Clinic
417 East Washington
(712) 328-1801
Hrs: 9:00 am - 2:00 pm
Monday thru Saturday

DAVENPORT
Clinic:
Scott County Health Department
428 Western
(319) 326-8618
Hrs: 8:00 am - 5:00 pm
Monday thru Friday

DES MOINES
Clinic:
Des Moines - Polk County Health Dept.
602 East First Street
(515) 283-4964
Hrs: 8:00 am - 4:00 pm
Monday thru Friday

Broadlawns Polk County Hospital
Outpatient Department
(515) 282-2246
Hrs: 24 hrs. a day
Monday thru Friday

ESTHERVILLE
Clinic:
Holy Family Hospital
(712) 362-2490
Hrs: by appointment
8:00 am - 4:00 pm
Monday thru Friday

FORT DODGE
Clinic:
Trinity Regional Hospital
South Kenyon Road
(515) 573-3101 Ex. 250 — Hours Open

IOWA CITY
Clinic:
Free Clinic - 120 North Dubuque Street
(319) 337-4459
Hrs: 7:00 pm - 9:30 pm
Monday and Thursday

MARSHALLTOWN
Clinic:
Family Planning VD Clinic
700 Say Street
(515) 752-7159
Hrs: 7:30 am - 4:30 pm
Monday thru Friday

SIOUX CITY
Clinic:
Woodbury County Clinic
514 Davidson Building
(712) 252-4521
Hrs: 9:30 am - 5:00 pm
Monday, Tuesday, Thursday & Friday
9:00 am - 12:00 noon Wednesday

WATERLOO
Clinic:
Schoitz Hospital
Kimball & Ridgeway Avenue
(319) 291-3515
Hrs: 1:00 pm - 5:00 pm
Monday thru Friday

What Is Being Done To Control The Incidence Of Venereal Disease?

Syphilis and gonorrhea can be cured. However, controlling the spread of these diseases is not a simple matter — too many undetected cases of both diseases exist to treat them out of existence. Presently there is no vaccine and one neither inherits nor acquires immunity. Thus everyone is susceptible.

In some non-venereal diseases, the causative organism passes to a person by means of impure food or water. Laws pertaining to sanitary production and handling of foods and treatment of public water supplies are helpful in preventing food and water-borne disease outbreaks. Other diseases are carried by insects or animals. Destroying these vectors will eliminate the spread of such diseases. But the germs of syphilis and gonorrhea are passed directly from human to human. Of course, people cannot be eliminated, so the only way to get rid of the germ is to treat the infected person.

In short, man is the carrier as well as the host of venereal disease. Thus the primary goal of a venereal disease control program is the identification and treatment of those persons in the community who have the disease, who have been exposed to the disease or who may be incubating the disease. Treatment of these persons will prevent the spread of the disease to others. Treatment can be given only when the infected persons are located.

The Venereal Disease Control Division of the department of health and several county health departments know the problems associated with stopping the spread of venereal diseases. The central purpose of public health is prevention of disease. Thus one of the main concerns of the groups working to control venereal disease is to prevent the occurence of new cases. The Venereal Disease Control Section and county health officers approach this problem in several ways: (1) by educating people about the symptoms and consequences of venereal disease; (2) by aiding in diagnosis and treatment; (3) by following up on positive laboratory results; and (4) by disease tracing and follow-up (epidemiologic) services provided to infected individuals for the protection of the affected community.

Education is important for several reasons. It can foster more openness in the discussion of venereal disease and elimination of associated myths and taboos. Knowledge about signs and symptoms, about treatment and about the consequences of not treating the disease may motivate more of those who have a venereal disease or who **suspect** they have the disease to seek diagnosis and treatment.

The Venereal Disease Control Section aids in treatment by providing drugs in some cases and reimbursing a doctor for treatment of adults and teenagers who may be unable to pay. The state health department also has a program which provides physicians with services for doing free culture tests for gonorrhea.

Laboratory results are sometimes a means of identifying possible new cases of a venereal disease. Blood tests are done routinely for such things as marriage license application and prenatal examinations. Any blood test results suggestive of syphilis would be followed up by the Venereal Disease Control Section as would suggestive results of a gonorrhea test.

Epidemiology is the study of the distribution of a disease and how it spreads. Finding previously unknown cases, asymptomatic cases and incubating cases are epidemiologic services provided by the public health representative. He will interview a person who is a known case of gonorrhea or syphilis to obtain names of persons that might have been exposed to the disease. Then he locates these contacts, notifies them of their possible exposure, and refers them to a private physician or clinic for medical evaluation and treatment, if indicated. Also, those persons who were exposed to a venereal disease but may as yet show no signs because the disease is in the incubation stage, may be encouraged to receive preventative treatment so that the disease will not occur.

The public health representative is aided in his interviewing work by an Iowa law which provides for confidentiality. As a result, the identity of the person interviewed and any names which are given to the public health representative are kept secret and are not accessible to anyone.

The public health representative can be contacted in any situation where problems occur. He can refer a patient to a physician when that patient has no place to receive treatment. He can also make arrangements for paying for treatment when a patient is unable to pay.

A HISTORICAL VIEW OF SYPHILIS AND GONORRHEA

The history of syphilis and gonorrhea is not essential in a presentation of venereal disease facts. However, it can serve to put these diseases in perspective and is of value in a history course. Some aspects of the history may serve as entertaining side comments in a presentation.

The film, "The Invaders," is good to show for a lecture or discussion of the history of venereal disease. Also, in the appendix there is a reprint of an article entitled, "Venereal Disease and the Great," by A. Dickson Wright.

Syphilis And Gonorrhea
Historical Notes

SYPHILIS

For nearly five hundred years scholars and medical historians have debated the origin of syphilis. An academic dispute has evolved over whether syphilis originated in the New World - the Columbian Theory - or had been present in the Old World from time immemorial - the Pre-Columbian Theory.

The Columbian Theory holds that syphilitic infection was well established in Hispaniola (Haiti) and was subsequently contracted and carried to Europe by Columbus's crew when they returned to Spain in March, 1493, following the second voyage.

The Pre-Columbian Theory maintains that syphilis had been present in Europe prior to the voyage of Columbus but was either unrecognized, confused with other diseases (leprosy, for instance), or was present in a much milder form.

Whatever its origin, there can be no question that a great epidemic of syphilis suddenly appeared in all parts of Europe between 1494 and 1498. At this time syphilis was apparently a very acute disease, frequently fatal in the secondary stage. It was almost immediately recognized as being a new and previously unknown condition. As early as 1500 many physicians throughout Europe were reporting and describing its symptoms.

Neither theory of the origin of syphilis is entirely satisfactory. While it is difficult to understand how the disease could spread so rapidly from a single port of entry, it is equally difficult to accept the conclusion that a previously mild and scattered disease could so suddenly become severe and epidemic. It may be that some form of syphilis did exist in Europe prior to Columbus, but that the introduction of a more virulent strain was necessary before the infection could reach epidemic proportions.

Voltaire wrote, "When the French went hot-headed to Italy, they easily won Genoa, and Naples, and the pox. Then they were driven out everywhere, and Genoa and Naples were taken from them, but they did not lose everything, for the pox remained with them." Voltaire was referring to the campaign of King Charles VIII of France who besieged Naples in Late 1494. Charles's army was made up of mercenaries from all parts of Europe - Switzerland, France, Germany, Poland, Italy, Hungary, Greece, and Spain. Shortly after the fall of the city in 1495, syphilis became widespread throughout Italy. The French army was so weakened by the disease that it was forced to abandon its prize and flee. The mercenaries dispersed throughout Europe, spreading syphilis as they traveled home.

In the closing years of the 15th Century descriptions of the disease began to appear in the literature of the day. The first mention of the new disease is found in an edict issued by Emperor Maximillian from the Diet of Worms on October 7, 1495. Maxmillian asserted that syphilis (which he referred to as "evil pox") was a curse sent by God as a punishment for blasphemy. In 1496, the Nuremberg City Health Commissioner published a leaflet which said that the syphilis epidemic was caused by the conjunction of the planets Jupiter and Saturn at 2 p.m., October 15, 1484.

In 1498 the first major book on syphilis was written by Francisco Lopez de Villalobos. He recognized the venereal mode of transmission and described the skin manifestations and later complications of syphilis. He also deduced the idea of treatment with mercury from a study of old Arabic literature.

The most famous book on syphilis was written in 1530 by an Italian pathologist, Hieronymus Fracastorious. Fracastorious's book, *Syphilis Sive Morbus Gallicus*, was written in verse and described the plight of a mythical shepherd lad named Syphilis who was afflicted with "the French disease" as a punishment for cursing the gods. The poem recognized the venereal nature of the infection and was a compendium of knowledge of the time regarding the disease. "Syphilis" eventually became the acknowledged name of the new disease in almost all scientific writings.

One of the first and most widely used "cures" for syphilis was guaiacum, the "sacred wood" of the West Indies. The typical sores and rashes of early syphilis seemed to disappear miraculously after a patient drank the water in which guaiacum had been pounded and boiled. However, it soon became evident that the wood did not prevent the **late** manifestations of syphilis from appearing.

Mercury, first introduced in 1497 as a treatment for syphilis, gradually replaced guaiacum in popularity and remained for centuries as the treatment of choice. While it is true that mercury given in the correct dosage helped some patients, it is unlikely that many were really cured. Too much mercury would cause serious damage; to do any good, it was necessary to give the mercury carefully in small amounts over a period of many years (twenty years, in some cases). (This long drawn-out period of time was appropriately illustrated in the phrase: "Five minutes with Venus, and a lifetime with mercury.") Most people were not willing to wait twenty years to be cured, and so consulted magicians, quacks, and drug sellers. These unscrupulous practitioners often gave large doses of mercury carelessly, collected their fees, and left town quickly before their patients began to suffer the effects. Overdoses of mercury caused swelling of the gums and ulcers of the tongue, lips, and jaws. Many patients lost their teeth. Some died of mercury poisoning.

Progress in syphilis research during several hundred years was steady, if not spectacular. Such men as Valambert, Diday, Hutchinson, Fournier, and Clutton made great contributions to the knowledge of the disease by describing the clinical manifestations likely to occur during the various stages.

One of the major obstacles to be overcome before a completely accurate picture of syphilis could be drawn was the notion that gonorrhea was an early symptom of syphilitic infection. Theophrastus Paracelsus around 1530 became the first medical man of stature to advance the theory that gonorrhea and syphilis were not distinct diseases, but rather different stages of the same disease. Controversy eventually developed around this concept, and debate continued until the self-experimentation of John Hunter in 1767.

In the 18th century, Hunter was probably the greatest figure in experimental

medicine and biology. In addition, he was a surgeon of great fame. He obtained pus from a patient with gonorrhea and inoculated himself. Unfortunately, the patient Hunter chose had apparently been infected with syphilis as well as gonorrhea. Thus, following the self-inoculation, both syphilis and gonorrhea developed in typical fashion. Despite treatment with mercury, Hunter developed classic syphilitic heart disease which ultimately caused his death in 1793.

When Hunter published his conclusion in 1787 that gonorrhea and syphilis were simply two manifestations of the same disease, his reputation was such that the entire subject was virtually exempted from scientific inquiry for fifty years. The credit for finally changing medical thought and delineating syphilis and gonorrhea belongs to Philippe Ricord. Ricord's report in 1838, based on over 2,500 human inoculations, demonstrated conclusively that syphilis and gonorrhea were distinct diseases.

The five year period between 1905 and 1910 yielded three major discoveries that finally brought syphilis within the realm of scientific medical management. They were the discovery of the causative agent of syphilis, the development of diagnostic blood test, and the discovery of the first adequate therapy.

In 1905, Fritz Schaudinn and Erich Hoffman saw and identified for the first time the germ which causes syphilis, a tiny pale spirochete they called **Treponema Pallidum**.

In 1907, August von Wassermann and his associates developed the first blood test for the detection of syphilis. Since the time of Wassermann's work over 200 different blood tests for syphilis have been described. The constant search for more sensitive and specific tests continues to this day.

Paul Ehrlich became interested in the possibility of developing an arsenic compound capable of curing syphilis without producing toxic effects in the early years of this century. By 1907 Ehrlich had reached the 606th preparation in his series. Number 606, Salvarsan, looked promising, but was put aside after an assistant reported that it had not proved effective in animal experiments. In 1909, Sacachiro Hata repeated the previous assistant's experiments and demonstrated that compound 606 was highly efficacious. After clinical trials had proved this to be the case in humans, Ehrlich, in 1910, presented Salvarsan to the medical world as the first safe and effective treatment for syphilis.

At first, a single injection of Salvarsan was used to treat syphilis; but as time went by, relapses (reappearance of the signs and symptoms of the disease) were reported, indicating that the patients were not completely cured. The doses were increased to two, and then three injections. Some patients continued to relapse after treatment. It was not until 1931, when bismuth was first used with Salvarsan or similar drugs, that a truly effective treatment schedule was found. Thirty doses of the Salvarsan-type drug and forty doses of the bismuth drug, given to the patient over a seventy week period, cured most patients of syphilis.

The manpower demands occasioned by the outbreak of World War II pointed up the need for a means to cure syphilis in considerably less time than seventy weeks-a year and a half. Special hospitals called Rapid Treatment Centers were set up around the country. Treatment time was reduced from seventy weeks to approximately ten days, but this still left a lot to be desired. For one thing, working men and mothers with small children often had to be transported hundreds of miles to one of these special hospitals.

In 1943, Dr. John Mahoney of the U.S. Public Health Service made it possible to cut

the treatment time for syphilis to a few seconds - the time necessary for a single injection. Dr. Mahoney found that penicillin, a drug discovered in 1928 by Alexander Fleming, - produced dramatic cures when used to treat syphilis. Penicillin soon was hailed as a "wonder drug," and quickly became the treatment of choice throughout the world. More than thirty years later, penicillin still remains the favored treatment for syphilis.

The problem facing public health officials and private physicians today is not the task of providing an adequate cure for an infected patient, but rather finding the patient who needs curing and convincing him of the necessity for treatment. Once syphilis ceased to be a therapeutic problem, it rapidly became a "social" one. In the minds of many, syphilis is not so much a contagious disease as it is a symptom of immoral behavior and/or uncleanliness. This climate of public opinion does not encourage the person who fears he may have contracted the disease to seek examination by a competent physician. As a consequence, although penicillin has been used effectively to cure syphilis for over thirty years, the disease is still one of the major public health problems in the United States today. It will probably remain so until the general attitude of the public is changed from one of moral condemnation to one of concern for the elimination of a major disease threat.

GONORRHEA

Gonorrhea is a disease of great antiquity; unlike syphilis, which made a dramatic entry into Europe, gonorrhea seems to have infected man for at least as long as written accounts have been kept. One of the earliest descriptions of clinical gonorrhea appears in an Egyptian papyrus dated 3500 B.C. The fifteenth chapter of the Book of Leviticus describes a disease of "running issue" which appears to be gonorrhea; the strictest sanitary measures are laid down for persons having an "issue" and for all persons who come in contact with such a person. Medical historians have also identified passages in ancient Chinese, Arabic, and Hindu writings that appear to refer to gonorrhea.

The term **gonorrhea** was coined by Galen in 130 A.D. and is translated literally as "a flow of seed." A few hundred years earlier, another Greek physician, Hippocrates, described gonorrhea and attributed its cause to "excesses of the pleasure of Venus."

Guilaume de Salicet and John of Aderne in the thirteenth and fourteenth centuries wrote accounts of gonorrhea which leave little doubt not only that the infection was widely prevalent and recognized as venereal in origin, but also that gonorrhea was considered a separate disease entity from syphilis. By 1530, however Paracelsus was teaching that gonorrhea was an initial symptom of syphilis. Not all physicians accepted Paracelsus's thesis, and debate continued until the self-experimentation of John Hunter in 1767 which closed the minds of scientific investigators for fifty years. The credit for finally changing medical thought and delineating the two infections belongs to Philippe Ricord, who extensively studied the problem in the middle of the last century.

In 1874, Albert Neisser identified the causative organism of gonorrhea from the purulent secretions of acute genital cases in both males and females, and from the secretions from the eyes of children afflicted with ophthalmia neonatorum (gonorrhea of the eyes in a newborn). He referred to the organism as "gonococcus." Two years later, Crede proved that gonococcal ophthalmia neonatorum could be prevented by the use of silver nitrate drops in the eyes of the newborn.

In 1892, Janet introduced the use of potassium permanganate solution as treatment for gonorrhea. The solution was administered as in intra-urethral irrigation and produced mixed results at best. Various other urethral irrigations, as well as gonococcal vaccines, antitoxins, and filtrates, were tried in later years with no greater success.

Sulfonamide therapy was introduced as treatment for gonorrhea in the late 1930's. The treatment was effective when first introduced, but became gradually less so as the organism developed immunity. By the end of World War II sulfonamide therapy could no longer cure gonorrhea. Luckily, it was at this same time that penicillin became available to fill the gap.

Today, penicillin is still the drug of choice in the treatment of gonorrhea. However, the recommended amount of penicillin for the treatment of gonorrhea has had to be increased several times since the drug was first used.

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TEACHING ABOUT VENEREAL DISEASE

A teaching unit on venereal diseases can be presented in a number of subject matter areas such as health, family living, science, and social studies. Where possible venereal disease should not be taught as a separate subject but should be incorporated into the existing curriculum. For example, in a biology class the subject of venereal disease can be included in a section on disease-causing bacteria, or a health class can discuss the subject along with other communicable diseases. Three or four class periods is usually adequate to cover both syphilis and gonorrhea.

During the venereal disease unit, the teacher should make certain the students understand the terms being used. (see "Glossary of Terms"). Also, the students should know some basic human anatomy such as where the urethra, the vagina, the cervix, the prostate are located. A short unit on anatomy and physiology of the reproductive and genito-urinary tracts before the venereal disease unit would be ideal if feasible.

There are a number of ways the unit on venereal diseases can be initiated. A few days before the unit begins, the students can be asked for their questions. At the beginning of the unit, the teacher should explain why venereal diseases are important enough to study; i.e. that the rising incidence of the diseases among young people is a serious threat to the health of the individual and the community. Or the teacher may present some venereal disease statistics without revealing the disease and ask students what is being described. The teacher may then want to proceed by directing a discussion or presentation of the medical aspects of syphilis and gonorrhea, or may want to open with a film such as **A Half Million Teenagers** or **V.D. A New Focus**. In some classes, the teacher may want students to study various aspects of venereal disease and present what they have learned to the rest of the class.

No matter where venereal disease is included in the curriculum, it is important to realize that the manner in which the subject is presented should be objective. If venereal disease is presented as a moral issue, the students are likely to tune out. In addition, moralizing tends to emphasize guilt which tends in turn to make an infected person secretive and unwilling to seek treatment. From a health standpoint, an objective and concise presentation of venereal disease symptoms and treatment (including where to go for help) is the best approach, because awareness of symptoms and knowledge of the consequences of untreated venereal disease may result in people obtaining prompt treatment or in avoiding infection.

The Education Subcommittee of the Public Advisory Committee on Venereal Disease Control in its April 1964 report, said that while short range venereal disease education has been demonstrated to be a positive factor in bringing infected individuals to treatment, "patterns of sexual behavior, including promiscuous sexual behavior, will not change in the very near future. From all indications today, the disease eradication effort must take this into account".

Discussion of impact of venereal disease on family, marital and other personal relationships would be valuable after the student has learned the basic facts about the diseases. Discussion of the problems of sexual promiscuity or sex among young people may also be valuable. A discussion of the responsibility every person has towards sexual contacts would no doubt benefit many students and is very important. However, such

discussion would have more impact once the student was aware of the medical aspects of syphilis and gonorrhea, including the consequences of not treating the diseases.

Finally, if the students learn nothing else, they should know: (1) Signs and symptoms of syphilis and gonorrhea, (2) Where to go for treatment or help, (3) That treatment and follow-up are confidential, and (4) The importance of telling sexual partners of their possible infection.

Suggested Classroom Activities

1. Give a pre-test before the venereal disease unit.
2. Have students write down their questions before the unit begins, and try to answer all questions during the unit.
3. Have the students (a) develop a program on venereal disease to present to other students, (b) design pamphlets and posters, (c) organize a venereal disease awareness week in the school.
4. Organize discussion groups to probe the topics of parental attitudes, impact of venereal diseases on personal relationships, **responsibility** of infected persons towards their sexual contacts, etc.
5. Have the class broken into committees, each of which would present a different aspect of the venereal disease problem.
6. Have the students collect recent articles about venereal disease.
7. Give the students venereal disease statistics without revealing the disease. Let them graph trends, then tell them the name of the disease which is increasing so quickly.

Objectives

There are several objectives of a venereal disease unit. After the unit, students would ideally (1) avoid exposure to a venereal disease, (2) if exposed, seek immediate treatment, avoid infecting others, tell others of possible infection and avoid reinfection. However, these objectives are difficult and perhaps impossible to measure. Some other objectives which the teacher has a better chance of evaluating are as follows:

The student should be able to....

(1) List and describe the signs and symptoms of gonorrhea and syphilis in the male and female.

(2) Name the laboratory tests used to detect and diagnose syphilis and gonorrhea.

(3) Answer correctly questions about how syphilis and gonorrhea are transmitted.

(4) List several places where help is available for problems concerning syphilis or gonorrhea.

(5) List the methods for prevention of syphilis and gonorrhea.

(6) Answer correctly the following questions:
Can a person get a venereal disease from homosexual contact? (yes)
Can a person get gonorrhea or syphilis more than once? (yes)
Do birth control pills help prevent gonorrhea or syphilis? (no)
What does a blood test (VDRL) for venereal disease detect? (syphilis)

ACTIVITIES TO FIGHT VENEREAL DISEASE

Venereal disease is epidemic - - especially among young people. The control of this epidemic will come about only with the involvement of community organizations, civic groups and concerned individuals. Several groups in Iowa have become involved, and because of their efforts many more Iowans are aware of the venereal disease problem and educated about it. (An example of such action is detailed in an article reprint from the *Iowa Pharmacist* in the Appendix.)

You can get involved (if you are not already). The following actions are constructive and effective:

1. **Form a V.D. Action Group** - A group effort is more effective. It can provide speakers on request, initiate efforts to secure diagnostic and treatment centers, organize a telephone referral service and many additional activities.
2. **Be sure that people know of disease symptoms and the nature of the venereal disease problem** - Use the mass media to reach large numbers of people, use displays and exhibits or distribute literature.
3. **Tell people what they can do if they have a problem** - Publicize the treatment centers and referral services so that help is readily accessible or publicize the location and telephone number of the venereal disease public health representative in your area.

If you need help with the initiation of these activities, contact the Iowa State Department of Health or your local health department.

There is no age barrier to involvement. Teenagers can become involved as well as adults. In fact, the most effective communication about venereal disease and its problems can come from youth speaking to youth. (An example of how this can work is Operation Venus in Philadelphia. A short article on this program is in the Appendix.)

RESOURCES FOR VENEREAL DISEASE EDUCATIONAL PROGRAMS

A variety of materials can be used in a venereal disease teaching unit: films, slides, tapes, pamphlets, student manuals, self-instruction units, quizzes, etc. Also, there are many materials which can be used for research and referral, by the teacher or his students.

Films are often successfully utilized in a venereal disease teaching unit. However, some of the more emotional or dramatic films may divert the students from learning the medical aspects of syphilis and gonorrhea if presented at the beginning of a unit. There are several films which present venereal disease facts objectively, and which could supplement or reinforce the teacher's presentation.

Materials Available From The Iowa State Department Of Health

The Venereal Disease Control Section Can Provide

1. Pamphlets
2. Information Packets (which include Iowa and national statistics on venereal disease, Iowa law pertaining to venereal disease, historical notes and pamphlets.)
3. Resource Guides
4. Medical information for physicians and nurses
5. Other teaching aids

The Venereal Disease Control Section can also provide assistance for teacher training workshops, speaker bureau workshops, citizen action groups and the formation of "hot lines" and other local referral systems.

To obtain any of the above materials or assistance, write:

Veneral Disease Control Section
Iowa State Department of Health
Robert Lucas Office Building
Des Moines, Iowa 50319

All of these materials are available free of charge. When requesting materials, indicate the number desired and allow one to three weeks for delivery.

The State Library Commission of Iowa has several venereal disease films available for loan. Requests should be made through your local library to:

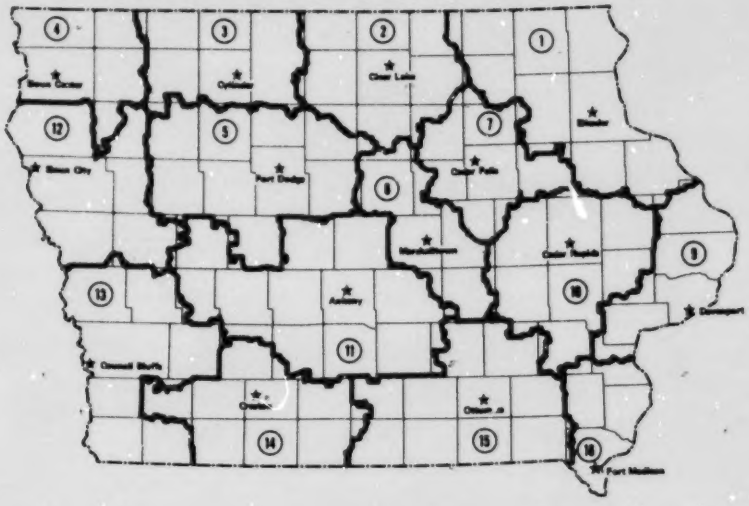
Audio-Visual Services Division
State Library Commission of Iowa
Historical Building
Des Moines, Iowa 50319
Telephone: 515-281-4316

Films are available on a free loan basis. If they are returned by mail, the borrower pays postage. They should be ordered at least 3 weeks before the date they are to be shown.

Materials Available From The Regional Educational Media Centers Of The Iowa Department Of Public Instruction

There are sixteen Regional Educational Media Centers which provide films and other materials to the schools in their areas. Most of the centers have an inventory of venereal disease films, and several carry other materials such as film strips, tapes and self-instructional units. The following is a listing of the Regional Educational Media Centers.

IOWA'S AREA EDUCATION AGENCY MEDIA CENTERS



1. Keystone Area Education Agency
   Media Services Division
   Rural Route 1, Box 330 A
   Elkader, Iowa 52043
   (319) 245-1480

2. Northern Trails Area Education Agency
   Educational Media Center
   Clear Lake, Iowa 50428
   (515) 357-6125
   (1-800-392-6640)

3. Lakeland Area Education Agency
   Media Center
   Cylinder, Iowa 50528
   (712) 424-3211

4. Area Education Agency 4
   Division of Media Services
   102 S. Main Avenue
   Sioux Center, Iowa 51250
   (712) 722-4376

5. Arrowhead Area Education Agency 5
   Learning Resource Center
   P.O. Box 1399
   Fort Dodge, Iowa 50501
   (515) 576-4113

6. Area Education Agency 6
   Media Center
   9 Westwood Drive
   Marshalltown, Iowa 50158
   (515) 752-1578

7. Area Education Agency 7
   Educational Media Center
   3712 Cedar Heights Drive
   Cedar Falls, Iowa 50613
   (319) 277-3330

9. Mississippi Bend Area Education Agency
   Educational Resource Center
   2604 West Locust Street
   Davenport, Iowa 52804
   (319) 391-0400

10. Grant Wood Area Education Agency
    Media Center
    4401 Sixth Street, S.W.
    Cedar Rapids, Iowa 52404
    (319) 399-6750

11. Regional Media Center
    Heartland Area Education Agency II
    1932 S.W. 3rd
    Ankeny, Iowa 50021
    (515) 964-2550

12. Area Education Agency 12
Media Center
1520 Morningside Avenue
Sioux City, Iowa 51106
(712) 279-6460

13. Loess Hills Area Education
Agtncy 13
Halverson Center for Education
Rural Route 1 (P.O. Box 1109)
Council Bluffs, Iowa 51501
(712) 366-0503

14. Green Valley Area Education
Agency 14
Educational Resources Center
Green Valley Road
Creston, Iowa 50801
(515) 782-8443

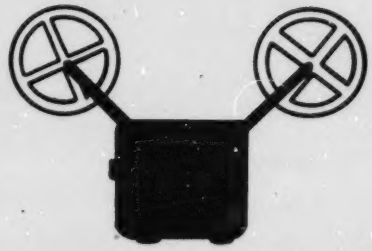
15. Area Education Agency 15
Media Center
Building No. 18
Ottumwa Industrial Airport
Ottumwa, Iowa 52501
(515) 682-8735

16. Area Education Agency 16
Media Center
305 Avenue F
Fort Madison, Iowa 52627
(319) 372-4821

Other Venereal Disease Audio-Visual Materials

The following is a listing of more recent venereal disease films. This list is not comprehensive or complete.

Most films are appropriate for adult group presentations in showing what kinds of things are being presented to young people as well as for informational purposes.



FILMS

†***A Half Million Teenagers . . . Plus.** 1974. Churchill Films, 662 North Robertson Boulevard, Los Angeles, California 90069. ($215) (17 minutes, color. Describes the prevalence of venereal disease among teenagers, covers the medical aspects of syphilis and gonorrhea, and shows the treatment process.) Jr. High-Adult.

How to Keep From Catching VD. 1972. Jarvis Couillard Associates, 142 Paseo de Gracia, Redondo Beach, California 90277. ($265) (20 Minutes, color. Narrated by Dr. Walter Smartt, the film explains the symptoms of syphilis and gonorrhea, the effects of untreated venereal disease, and preventive measures that may reduce the risk of infection.) Grade 12 — College.

***The Invader.** Center for Mass Communiction of Columbia University Press, 136 South Broadway, Irvington, New York 10533. ($203) (29 minutes, black and white. Presents man's efforts since the fifteenth century to cope with syphilis.) Jr. High — Adult.

Kathy. Aims Instructional Media Services, Inc., P.O. Box 1010, Hollywood, California 90028. ($240) (19 minutes, color. Follows in dramatic form Kathy's discovery that she may have gonorrhea and her trip to a clinic for treatment. The facts of gonorrhea are presented.) Grade 11 — College Age.

* Recommended † Available from the State Library

Look What's Going Around. 1973. Churchill Films, 662 N. Robertson Boulevard, Los Angeles, California 90069. ($195) (16 minutes, color. Film set largely in clinic. Subjects emphasized are treatment, symptoms, spread of disease, reasons for identifying contacts and prevention by use of the condom.) Mature high school students — Adults.

Love Needs Care. 1971. Michael J. Herold, 10221 11th Street, Seattle, Washington 98146. ($35) (8 minutes, color. A psychedelic approach to dispelling myths about venereal disease transmission. Purpose is to motivate patients to go to a clinic.) High School — Adult.

The Pain of Silence. 1971. UCOM Educational, 907 Culver Road, Rochester, New York 14609. ($155) (12 minutes, color. Dramatic film describing mental torture of a teenage girl with a venereal disease.) High School — Adult.

SH — The Silence is Deafening. 1972. Tomlin Film Production. 405 Lexington Avenue, New York, New York 10017. ($165) (13 minutes, color. Audio contains segments from interviews with teenagers and adults, some of whom have been infected with a venereal disease. Visual teaches facts about syphilis and gonorrhea.) Grade 11 — Adult.

†***VD - - Attack Plan**. 1972. Walt Disney Educational Materials Company, 800 Sonora Avenue, Glendale, California 91201. ($225 or $215) (Two versions: 16 minutes and 14 minutes, color. Longer version contains information about prophylactic measures. This animated film covers the facts of syphilis and gonorrhea using cartoon characters representing gonorrhea and syphilis germs, their "leader", shame, ignorance and fear. The medical aspects of venereal disease are presented in a humorous and attention-holding manner.) All ages.

VD: A Call to Action. Association Instructional Materials, 600 Madison Avenue, New York, New York 10022. ($300) (27 minutes, color. Follows in dramatic form the work of an epidemiologist through a typical day.) Jr. High — Adult.

VD Every 30 Seconds. 1971. Alfred Higgins Production, 9100 Sunset Boulevard, Los Angeles, California 90069. ($210) (17 minutes, color. Shows in animated portions how syphilis and gonorrhea invade the body, infect many organs if untreated and cause permanent damage.) Grades 10 — Adult.

VD — Name Your Contacts. Coronet Films, 65 E. South Water Street, Chicago, Illinois 50501. (22 minutes, color or black and white. Emphasizes the necessity of naming sexual contacts when infected with venereal disease. Uses dramatic form.) Grades 11 — College.

***V.D. A New Focus**. 1971. American Educational Films, 331 North Maple Drive, Beverly Hills, California 90210. ($235) (About 11 minutes, color. Presents medical facts. Narrated by James Brolin.) Grades 8 — Adult.

***V.D. A Plague on Our House**. Available on loan from Local Pfizer Laboratories Division, 235 East 42nd Street, New York, New York 10017. (No charge for borrowing.) (35 minutes, color. An award winning television documentary which presents the medical aspects of venereal disease, the problems associated with control of the disease, the interview situation and role of public health, and the need for venereal disease education.) Grades 10 — Adult.

* Recommended † Available from the State Library

†*VD Questions, VD Answers. BFA Educational Media, 2211 Michigan Avenue, Santa Monica, California 90404. ($190) (14½ minutes, color. Presents information about the extent of the VD Crisis, the causes, symptoms, correction, and prevention of venereal diseses.) All ages.

Venereal Disease: The Hidden Epidemic. 1972. Encyclopedia Britannica Educational Corporation, 425 North Michigan Avenue, Chicago, Illinois 60611. ($296) (27 minutes, color. The three parts include a history of venereal disease, clinical analysis, and treatment and prevention. Shows clinical symptoms, discusses consequences, and through interview form presents the experiences of infected individuals.) Grades 10 — Adult.

When Love Needs Care. 1972. See-Saw Films, P.O. Box 262, Palo Alto, California 94302. ($185) (13 minutes, color. Familiarizes young people with symptoms of venereal disease and reviews a young man's and a woman's appointment with their respective physicians. Accompanied by a 20-page Discussion Manual.) High School — Adult.

RECENT FILMS (Suggested for students knowledgeable about gonorrhea and syphilis)

VD: A NEW(ER) FOCUS. 1977. American Educational Films, P.O. Box 5001, 132 Lasky Drive, Beverly Hills, California 90212 ($300) (20 minutes, color. Update of earlier version with James Brolin narrating, which touches briefly on several STDs in addition to gonorrhea and syphilis.) Junior High-Senior High.

VD: OLD BUGS, NEW PROBLEMS. 1977. Alfred Higgins Productions, Inc. 9100 Sunset Boulevard, Los Angeles, California 90069 ($300) (20 minutes, color. Excellent discussion of the chief STDs in convincing teenage settings.) High School —Adult.

VD: QUIZ: GETTING THE RIGHT ANSWERS. 1977. American Educational Films, P.O. Box 5001, Beverly Hills, California 90210 ($300) (25 minutes, color. Honest, intelligent film about the prevalent and threatening STDs, geared for the young adult. High School—Adult

VD: WHAT IS IT? 1977. Churchill Films, 622 N. Robertson Blvd., Los Angeles, California 90069. ($275) (20 minutes, color. Covers basic information about STDs in a classroom setting, leaving some questions hanging for student discussion.) High School.

FILM STRIPS

*V.D.: Anyone Can Get It. BFA Educational Media, 2211 Michigan Avenue, Santa Monica, California 90404. 2 strips, each $8; 1 record $5; boxed $21; 2 strips, each $8; 1 tape cassette $7; boxed $23. Jr. High—Adult.

*V.D.: Our Intimate Enemy. BFA Educational Media, 2211 Michigar Avenue, Santa Monica, California 90404. 2 strips, each $8; 1 record $5; boxed $21; 2 strips, each $8; 1 tape cassette $7; boxed $23. Jr. High—Adult.

*Venereal Disease Learning Materials kit. Betzer Productions, Inc., 450 East Ohio Street, Chicago, Illinois 60611. 5 strips, 3 records, written materials; all $75. (approximate) Jr. High—Adult. (Available through the Information and Education Division of the Iowa State Department of Health.)

*Recommended †Available from the State Library

Venereal Disease Bibliography

BOOKS

Brooks, Stewart M., *The V.D. Story,* Barnes Pub., 1971.

Deschin, Celia S., *The Teenager and V.D.,* R. Rosen Pub., 1969

Goode, Stephen, *V.D. Bibliography 1966-1970.* Whitson Pub., 1972.

Grover, John, *V.D. the ABC's,* Prentice Hall, 1971.

King, A.J., *Venereal Diseases,* Bailleire Pub., 1969. (Written primarily for professional use.)

Rosebury, Theodor, *Microbes and Morals,* Viking Press, 1971.

*PAMPHLETS

"Facts to Believe about Venereal Disease," Imagination, Inc., 1821 University Ave., St. Paul, Minnesota 55104. ($8 per 100)

"Plain Talk about VD," Youngs Drugs Products Corporation, P.O. Box 5, Piscataway, New Jersey 08854. (Available upon request.)

"Sexually Transmitted Diseases" (017-044-00026-5, United States Government Printing Office, Superintendent of Documents, Washington, D.C. 20402. (40¢ ea.)

"Some Questions & Answers about Herpes"
"Some Questions & Answers about Penicillin Resistant Gonorrhea"
"Some Questions & Answers about VD"
"The Sexually Active and VD"
"Women and VD"
(All published by American Social Health Association, 260 Sheridan Ave., Palo Alto, CA 94306. Prices $8 per 100, $55 per 1,000).

"Strictly for Teenagers . . . some facts about venereal disease," C.W. Associated, P.O. Box 34099, Washington, D.C. 20034, (Single copies 25¢ ea., $8 per 100)

"VD and You," U.S. Government Printing Office, Superintendent of Documents, Washington, D.C. 20402 (017-023-0068-3) (35¢ ea.)

"VD and You," C.W. Associates, P.O. Box 34099, Washington, D.C. 20034, (25¢ single copy; $8 per 100)

"VD Facts for Everybody," Pfizer Laboratories Division, Pfizer, Inc., 235 East 42nd Street, New York, N.Y. 10017 (Available upon request.)

"VD: You'd Better Stop It Because Nobody Else Can," Dean Rubber Company, The, 16th and Iron, North Kansas City, MO 64116 ($1.35 per 100)

"What You Must Know about STD's," Keyword Publications, Inc., 17 Oakwood Ave., West Hartford, Ct. 06119 (1-99, 30¢ ea; $21 per 100)

*Publication prices quoted are those current in 1977-78. When ordering after elapse of a year or more, it is advisable to check price information with the publisher.

MANUALS AND BOOKLETS

"Facts about VD for Today's Youth," and **"VD Claptrap,"** Institute for Family Research and Education, Ed-U Press, 760 Ostrom Ave., Syracuse, N.Y. 12310 (Single copy 35¢ ea.; $27 per 100)

"A Summary for Parents and Students on VD," Educational Summaries, Inc., P.O. Bin 941, Pasadena, California 91109. (Single copy 50¢; $25 per 100)

"VD Facts You Should Know," Scott, Foresman & Company; 200 East Lake Avenue, Glenview, Illinois 60025. ($2.34 ea; Teachers' Research Notes 30¢)

"VD Handbook" by Donna Cherniak and Alan Feingold. Montreal Health Press, P.O. Box 1000, Station G, Montreal 130, Quebec, Canada H2W2N1 (Excellent up to date, 48 page resource on the sex organs, pelvic examination, responsibility of sex, as well as detailed information about gonorrhea, syphilis and the other sexually transmitted diseases.) (Free single copies (send 35¢ for handling) — 10 maximum copies free; $20 per 100)

"Venereal Disease, America's Modern Plague," Lindsay R. Curtis, M.D., McKesson Laboratories, Fairfield, Conn. 06430 (Less than 200 books, 45¢ ea., more than 200 books, 35¢ ea.)

"What You Should Know about VD," The Benjamin Co., Inc., 485 Madison Avenue, New York, N.Y. 10022. ($340 per 1,000; 100 copy minimum)

"What Everyone Should Know about VD," and **"About Syphilis and Gonorrhea,"** Channing L. Bete Co., Inc., 45 Federal Street, Greenfield, Mass. 01301, (50¢ single copy; $22 per 100)

"Venereal Disease," American Medical Association, Dept. of Health Education, Division of Scientific Activities, 534 N. Dearborn, Chicago, Ill. 60610. (1-99 copies, 75¢ ea.; 100-499, 55¢ ea.) *Posters* $1.25 ea.: **"If You Are Old Enough to Have Sexual Contact, You Are Old Enough to Have VD."** and **"Don't Screw Around with It."**

REPRINTS OF READERS' DIGEST ARTICLES:

"The Grim New Venereal Disease in Our Midst," "Herpes article" (10-50¢; 100-$3.50)

"The Plain Truth about VD," (10-50¢; 100-$3.50) **"The Truth Can Stop VD"** (10-50¢; 100-$3.50) **"How to Stop the VD Epidemic,"** (12-$1.00; 100-$4) **"VD Is on the Rise Again,"** (10-50¢; 100-$3.50) **"VD the Vicious Chain,"** (10-50¢; 100-$3.50) The Reader's Digest Association, Inc., Pleasantville, New York 10570.

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PROFESSIONAL MATERIALS

"Suggestions for Instruction about Gonorrhea and Syphilis in Jr. & Senior High Schools," and **"VD Education in California,"** Department of Education State Education Bldg., 721 Capitol Mall, Sacramento, Calif., 95814

"Teacher's Handbook on Venereal Disease Education," American Association of Health, Physical Education & Recreation, National Education Association, 201 16th St., N.W., Washington, D.C. 20036. $2.50

"The Urologic Clinics of North America," W.B. Saunders Company, West Washington Square, Philadelphia, PA 19100, Yearly subscription $32.

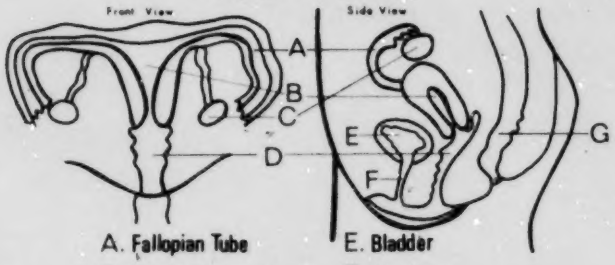
Iowa State Department of Health
Venereal Disease Control Section
Robert Lucas Office Building
Des Moines, Iowa 50319
515-281-3031
(Call Collect)

Venereal Disease Glossary

Before beginning the study of venereal disease, there are some words that need to be defined in order to avoid confusion.

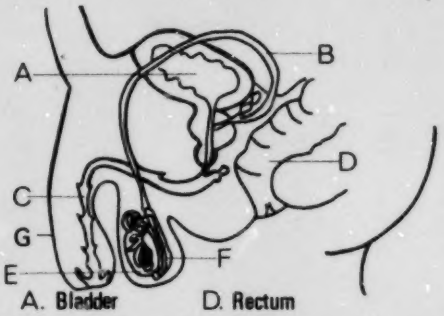
Not everyone knows the correct names for some of the parts of the body. It is important that everyone understand from the start what is being discussed or referred to...

FEMALE PELVIS



A. Fallopian Tube
B. Uterus
C. Ovary
D. Vagina
E. Bladder
F. Urethra
G. Rectum

MALE GENITO-URINARY TRACT



A. Bladder
B. Vas deferens
C. Urethra
D. Rectum
E. Testis
F. Epididymis
G. Penis

cervix — The necklike opening to the uterus from the vagina. Often the initial site of venereal disease infection.

fallopian tubes — The tubes that extend out from each upper side of the uterus and end near the ovaries. These tubes serve as a passage for the egg cell (ovum) from the ovary to the uterus and for spermatozoa from the uterus.

ovaries — The two female glands which produce egg cells.

ovum — An egg cell. A female reproductive cell.

rectum — The terminal part of the large intestine.

urethra — A canal by which urine is discharged from the body.

Epididymis — an elongated mass at the back of the testes composed of tubes leading to the excretory duct of the testicle.

Prostate — A gland in the male that surrounds the neck of the bladder and the beginning of the urethra. It secretes a thin fluid which forms part of the semen.

rectum — The terminal part of the large intestine.

testicle (testes) — One of two glands in the scrotum where male sex cells are produced.

urethra — The canal by which urine is discharged from the body. In the male, the canal also provides for the passage of seminal fluid.

uterus — Pear-shaped reproductive organ in the female where the unborn baby grows and develops until birth.

vagina — The muscular structure or canal extending from the uterus to the outside of the body.

vas deferens — The excretory duct of the testicle. It is a continuation of the epididymis.

OTHER TERMS USED

antibiotic — A chemical substance which can inhibit the growth of or destroy bacteria and other microscopic organisms.

antibody — A substance produced by the body which counteracts the effects of disease producing bacteria or other microscopic organisms.

asymptomatic — Without signs or symptoms.

ataxia — Inability to coordinate voluntary bodily movements.

bismuth — A heavy metallic chemical element used in alloys and medicines.

central nervous system — The part of the nervous system consisting of the brain and spinal cord.

chancre — The initial painless sore or lesion of primary syphilis, formed at the point where spirochetes enter the body.

condom — A rubber sheath worn over the penis during sexual intercourse.

congenital syphilis — Syphilis passed by a mother to her baby before the baby's birth.

contagious — Spread by direct or indirect contact.

culture — A mass of micro-organisms (germs) growing on a laboratory culture medium.

culture medium — A substance on which micro-organisms grow.

darkfield examination — A microscopic examination using a special kind of lighting which makes the object examined appear bright against a dark background.

ectopic pregnancy — The implantation of a fertilized ovum (egg) outside of the uterus (which is the normal place for implantation) i.e. in the fallopian tube.

epidemic–A disease which attacks many people at the same time in the same area.

epidemiologist — One who studies epidemics. In venereal disease control, the one who is involved in the contact interviewing and investigative process.

etiology — The causes of a specific disease.

etiologic agent — The causative organism of a disease.

fertilization — The union of male and female sex cells to form a cell that will develop into a new individual.

fetus — The child in the uterus (womb) after the third month of development.

genitals — The external sex organs.

gonococcus — The bacterium that causes gonorrhea.

guaiacum — A tropical American tree whose resin formerly was used in some medical remedies.

gumma — A soft rubbery tumor occurring in late syphilis.

incubation — The interval between exposure to an infection and the appearance of the first symptom or sign.

infectious — Capable of causing infection.

latent — Hidden; not active.

locomotor ataxia — Syphilis of the spinal cord causing failure of muscular coordination.

meningitis — Inflammation of the membranes that envelop the spinal cord and brain.

micro-organism — Plant or animal organism too small to be seen without a microscope.

morbidity — Proportion of diseased persons in a given community.

mucous membrane — Lining of passages and cavities opening to the air, and which secretes mucus.

paresis — Syphilis of the brain, causing insanity.

pelvic inflammatory disease (P.I.D.) — Inflammation of organs in the pelvic cavity.

penicillin — A very powerful drug for destroying bacteria. Made from a mold.

placenta — A structure which develops in the uterus during pregnancy and through which the fetus receives its nourishment.

salpingitis — Inflammation of a fallopian tube (formerly known as pelvic inflamma—tory disease).

Salvarsan — Trade name for a compound of arsenic, once used to treat syphilis.

semen — Fluid containing male reproductive cells or sperm.

serology — Science of dealing with properties and actions of serums.

spirochete — A corkscrew-like micro-organism, one type of which causes syphilis (the Treponema pallidum).

systemic — Having to do with the entire body rather than a localized area.

tabes dorsalis — A wasting or atrophy due to disease, also known as locomotor ataxia, which is a degeneration of the spinal cord and of the sensory nerve trunks.

tubal pregnancy — The implantation of a fertilized egg in one of the fallopian tubes.

VENEREAL DISEASE PRE-TEST

Check Your Knowledge About Venereal Diseases

1. Venereal diseases are transmitted by: a) Sexual contact. b) Sexual contact with an infected person. c) Kissing. d) Toilet seats.
2. The most common reported communicable disease in the United States is: a) Mumps. b) Rubella. c) Gonorrhea. d) Chicken Pox. e) Syphilis.
3. Gonorrhea and syphilis are: a) Two diseases caused by different germs. b) Two stages of the same disease. c) Two names for the same disease.
4. The signs and symptoms of both syphilis and gonorrhea: a) Are usually painful. b) Are almost always noticeable. c) Are often hidden. d) Are always hidden.
5. If a man and woman both get gonorrhea: a) The man will probably notice symptoms first. b) The woman will notice symptoms first. c) Both will notice at the same time.
6. The symptoms of gonorrhea may be: a) Sore on the sex parts. b) Discharge from the sex parts. c) Rash on the body. d) None of the above.
7. The symptoms of syphilis may be a: a) Sore on the sex parts. b) Rash on the body. c) Sore throat. d) Any of the above.
8. A woman on birth control pills who has sexual contact with an infected male: a) Will never get gonorrhea. b) Is less likely to get gonorrhea. c) Is more likely to get gonorrhea. d) Is no more or less likely to get gonorrhea.
9. Once a person has contracted syphilis or gonorrhea: a) He or she is immune. b) He or she can catch it again and again.
10. If a pregnant woman has syphilis and is not treated, her baby: a) Will always be born with syphilis. b) Will not be born with syphilis.
11. If gonorrhea is left untreated, which of the following may result? a) Insanity. b) Sterility. c) Bone deformation.
12. Which of the following could be a result of untreated syphilis? a) Insanity. b) Blindness. c) Crippling. d) Any of the above.
13. If a woman thinks she might have gonorrhea, she should: a) Wait until someone catches it from her to make sure. b) Go to a doctor or health clinic and ask to be examined for gonorrhea. c) Go to a doctor or clinic and ask for a physical examination.
14. If you get syphilis and go to a doctor, the doctor: a) Can help, but not cure you. b) Can sometimes cure you. c) Can always cure you.
15. When the symptoms of syphilis disappear without treatment, the disease organism: a) Has been spontaneously eliminated. b) Remains in the body. c) Is overcome by the body's defenses.

Correct answers: 1. (b), 2. (c), 3. (a), 4. (c), 5. (a), 6. (b), 7. (d), 8. (c), 9. (b), 10. (a), 11. (b), 12. (d), 13. (b), 14. (c), 15. (b)

VENEREAL DISEASE POST-TEST

Check Your Knowledge About Venereal Diseases

1. How might a person be infected with gonorrhea or syphilis?
   A. From sexual contact.
   B. From sexual contact with an infected person.
   C. Kissing.
   D. Toilet seats.
2. The most common reported communicable disease in the United States is:
   A. Mumps.
   B. Rubella.
   C. Gonorrhea.
   D. Chicken Pox.
   E. Syphilis.
3. Gonorrhea and syphilis are:
   A. Two diseases caused by different germs.
   B. Two stages of the same disease.
   C. Two names for the same disease.
4. The signs and symptoms of both syphilis and gonorrhea:
   A. Are usually painful.
   B. Are almost always noticeable.
   C. Are often hidden.
   D. Are always hidden.
5. If a man and woman both get gonorrhea:
   A. The man will probably notice symptoms first.
   B. The woman will notice symptoms first.
   C. Both will notice at the same time.
6. The symptoms of gonorrhea in males may be:
   A. Sore on the sex parts.
   B. Discharge.
   C. Rash on the body.
   D. None of the above.
7. The symptoms of syphilis may be a:
   A. Sore on the sex parts.
   B. Rash on the body.
   C. Sore throat.
   D. All of the above.
8. A woman on birth control pills:
   A. Will never get V.D. if she has sexual contact with an infected person.
   B. Is less likely to get V.D. if she has sexual contact with an infected person.
   C. Is more likely to get V.D. if she has sexual contact with an infected person.
   D. Is no more or less likely to get V.D. if she has sexual contact with an infected person.

9. If you catch syphilis or gonorrhea once, you:
   A. Can catch it again from anyone who is infected.
   B. Can never catch it from an infectious person again.
   C. Become immune to it for a long time.

10. Which of the following could be a result of untreated syphilis?
   A. Insanity.
   B. Blindness.
   C. Crippling.
   D. Any of the above.

11. If a woman thinks she might have gonorrhea, she should:
   A. Wait until someone catches it from her to make sure.
   B. Go to a doctor or clinic and ask to be examined for gonorrhea.
   C. Go to a doctor or clinic and ask for a physical examination.

12. If you get syphilis and go to a doctor, the doctor:
   A. Can help, but not cure you.
   B. Can sometimes cure you.
   C. Can always cure you.

13. When the symptoms of syphilis disappear without treatment, the disease organism:
   A. Has been spontaneously eliminated.
   B. Remains in the body.
   C. Is overcome by the body's defenses.

14. If scar tissue from a gonorrhea infection blocked the fallopian tubes in a woman completely so the ovum could not pass, which of the following could be the result?
   A. Sterility
   B. Insanity.
   C. Blindness.
   D. Heart disease.
   E. I don't know.

15. In which of the following ways would a woman most probably get to a doctor to be treated for gonorrhea within the shortest time after she was infected?
   A. She notices a discharge from her vagina.
   B. An infected man knows either that he became infected from her or that he may have infected her, and he tells her.
   C. The infection has spread to her uterus and tubes and she has great pain.

16. When is syphilis most likely to cause serious damage to the body of the infected person?
   A. Before he is infectious.
   B. While he is infectious.
   C. After he is no longer infectious.
   D. I don't know.

17. If the seminal duct of a man is blocked by scar tissue from a gonorrhea infection so the sperm cannot pass out, which of the following would the man become?
    A. Blind.
    B. Arthritic.
    C. Sterile.
    D. Insane.
    E. I don't know.

18. Could a person who had a chancre (the first sign of syphilis) pass syphilis along to other persons without realizing that the chancre was there or that he or she was sick?
    A. Yes.
    B. No.
    C. Not likely.
    D. I don't know.

19. Which of the following infected persons most often have the first signs of syphilis hidden deep inside the body where they are most likely to be overlooked and not noticed?
    A. Women.
    B. Men.
    C. One as likely as the other.
    D. I don't know.

20. Of the following three people who had chancres, which ones are not cured and still have syphilis?
    1. Puts salve on it and it disappears. 2. Does nothing and it disappears.
    3. Gets treatment from a doctor and it disappears.
        A. 1 and 3.
        B. 2 and 3.
        C. 1 and 2.
        D. I don't know.

21. In which of the following infected persons would you expect to find symptoms of gonorrhea where they would be most likely to be noticed?
    A. Men.
    B. Women.
    C. One as likely as the other.
    D. I don't know.

22. If you could do all of the following which would be the surest way to keep from catching syphilis and gonorrhea?
    A. Kill all mosquitoes.
    B. Stay out of crowded public places.
    C. Avoid skin-to-skin contact with infected persons.
    D. Avoid public toilets.
    E. I don't know.

23. If one of the following persons infected with syphilis got well, which would it probably be?
    A. One had both natural and acquired immunity.
    B. One had both active and passive immunity.
    C. One got shots.
    D. I don't know.

24. Against which of the following diseases do we now have a vaccine?
    A. Syphilis.
    B. Gonorrhea.
    C. Both syphilis and gonorrhea.
    D. Neither syphilis or gonorrhea.
    E. I don't know.

25. Which of the following is true about tubal pregnancy from gonorrhea?
    A. It is a natural thing for every mature woman.
    B. It cannot be avoided.
    C. It can be avoided by prompt treatment.
    D. I don't know.

26. Which of the following new babies should have special drops of medicine put in their eyes?
    A. Those whose mothers are known to have gonorrhea.
    B. Those whose mothers are known to have syphilis.
    C. All new babies.
    D. I don't know.

27. Most men begin to realize there is something wrong with them within which of the following time periods after they are infected with gonorrhea?
    A. 2 to 10 days.
    B. 1 to 3 days.
    C. 24 hours.
    D. I don't know.

Venereal Disease Quiz Answer Key
Annotated

1. (B) People catch venereal disease from people who are infected. They catch it through sexual contact with an infected person.
2. (C) Gonorrhea is the number one reported communicable disease in the United States.
3. (A) Sometimes gonorrhea and syphilis are confused as being the same disease since they are both called venereal diseases. However, they are as distinct as mumps is from measles and are caused by different organisms.
4. (C) Most females who have gonorrhea will have no signs or symptoms or minimal ones. Thus the symptoms for gonorrhea are often hidden in females. The chancre of primary syphilis is painless and thus is often missed in both men and women. Also, it may be hidden deep within the body. The rash of secondary syphilis can be so minimal that it is missed.
5. (A) Men usually have very noticeable symptoms for gonorrhea within 2 to 10 days after they are infected. Women will usually have **no** symptoms during the same period of time. If the infection spreads to other areas of the woman's body such as the fallopian tubes, then she will sometimes notice symptoms. But she will notice them later, perhaps weeks later, than a man would.
6. (B) The symptoms of gonorrhea are a pus discharge and burning pain on urination. The organism of gonorrhea is a pus producing bacteria.
7. (D) A person with syphilis may have a sore on the sex parts first. Then he may have a body rash along with a sore throat.
8. (C) The birth control pill increases the alkalinity and moisture in a woman's vagina making it a more congenial environment for the gonorrhea organism.
9. (A) There is no natural or built-up immunity to either syphilis or gonorrhea.
10. (D) Insanity, blindness or crippling could be a result of the spirochete attacking the central nervous system. Not all of these results would normally happen to the same person.
11. (B) A woman who suspects she has gonorrhea should see a physician and tell him what she suspects. Gonorrhea may not be discovered by a routine physical examination. Waiting is never a good idea. Damage could be occurring.
12. (C) The syphilis spirochete is very sensitive to antibiotics. Treatment of syphilis is always effective.
13. (B) The symptoms of syphilis disappear even without treatment. But the organism continues to live and multiply in the blood stream.
14. (A) If the ovum cannot pass through the fallopian tube then fertilization and implantation cannot take place, as is necessary for a normal pregnancy, so sterility is the result.

15. (B) It is important to point out the necessity of an infected man telling his partner about her possible infection. It may be the only way that an infected woman can be saved from damage to her body. Most women do not notice a discharge when they have gonorrhea.
16. (C) Syphilis does not harm the body during the incubation period, the primary stage, the secondary stage or the early latent stage. It takes years for damage to occur, while the infectious period is over within one year.
17. (C) Sperm are necessary for fertilization to occur. If the man cannot provide the sperm because the tube which allows the sperm to pass is blocked, then he cannot become a father.
18. (A) The chancre is painless and often hidden from view. Thus a person could be infectious and not know it.
19. (A) A woman is likely to have a chancre in her vagina or on her cervix where she would not see it. A man may have the chancre on his penis where he would notice it.
20. (C) The chancre of syphilis will disappear with or without treatment. The only way to eliminate the spirochete from the body is treatment with antibiotics.
21. (A) Men usually have noticeable, painful symptoms for gonorrhea (discharge and painful urination). Women often have no symptoms.
22. (C) The only way to catch venereal disease is from close skin to skin contact, usually sexual.
23. (C) No one has any kind of immunity to syphilis or gonorrhea. There is no such thing as active or passive immunity.
24. (D, No vaccine has been developed for any venereal disease.
25. (C) If a woman with gonorrhea is treated promptly, then no damage should occur in her fallopian tubes and thus a tubal pregnancy (sperm and egg united in the fallopian tube which is blocked) would be avoided.
26. (C) By law, drops of medicine to prevent gonorrhea of the eye are placed in the eyes of all newborns.
27. (A).

APPENDIX

If you would like updated statistics, please write Venereal Disease Control Section, Iowa State Department of Health, Lucas Office Building, Des Moines, Iowa 50319.

CODE OF IOWA, 1973

CHAPTER 140

VENEREAL DISEASE CONTROL

140.1 Title
140.2 Definition.
140.3 Confidential reports.
140.4 Report to state department.
140.5 Examination results.
140.6 Failure to report.
140.7 Determination of source.
140.8 Examination of persons suspected.
140.9 Minors of sixteen or more.
140.10 Certificate not to be issued.
140.11 Pregnant women.
140.12 Blood test in pregnancy cases.
140.13 Medical treatment of newly born.
140.14 Religious exceptions.
140.15 Penalty.
140.16 to 140.41 Repealed by 63GA, ch 136 Sec. 1.

140.1 Title. This chapter shall be known as the "Venereal Disease Control Act".

140.2 Defintion. For the purposes of this chapter venereal disease shall mean syphilis, gonorrhea, chancroid, granuloma inguinale, and lymphogranuloma venereum.

140.3 Confidential reports. Reports to the state department of health which include the identity of persons infected with venereal disease shall be kept secret, and all such information, records, and reports concerning the same shall be confidential and shall not be accessible to the public. However, such reports, information, and records shall be secret and confidential only to the extent which is necessary to prevent identification of persons named therein; and the other parts of such reports, information, and records shall be public records. The preceding sentence shall prevail over any inconsistent provision of this chapter.

140.4 Report to state department. Immediately after the first examination or treatment of any person infected with any venereal disease, the physician performing the same shall transmit to the state department of health a report stating the name, age, sex marital status, occupation of patient, name of the disease, probable source of infection, and duration of the disease; except when a case occurs within the jurisdiction of a local health department, such a report shall be made directly to the local health department which shall immediately forward the same information to the state department of health. Such reports shall be made in accordance with rules adopted by the state department of health. Such reports shall be confidential. Any person in good faith making a report of a venereal disease shall have immunity from any liability, civil or criminal, which might otherwise be incurred or imposed as a result of such report.

140.5 Examination results. Any person who is in charge of a public, private, or hospital clinical laboratory shall report to the state department of health, on forms prescribed by the department, results obtained in the examination of all specimens which yield evidence of or are reactive for syphilis, gonorrhea, chancroid, granuloma inguinale, or lymphogranuloma venereum. The report shall state the name of the person from whom the specimen was obtained, the name and address of the physician or other person submitting the specimen, the laboratory results, the test employed, and the date of the laboratory examination.

140.6 Failure to report. Any physician or other person who fails to make or falsely makes any of the reports required by this chapter concerning persons infected with any venereal disease, or who discloses the identity of such person, except as herein provided, shall be punished as provided in this chapter. Failure to report any venereal disease as specified in this chapter shall be cause for the refusal of a renewal of license as required in section 147.10.

140.7 Determination of source. The local or the state department of health shall use every available means to determine the source and spread of any infectious case of venereal disease which is reported.

140.8 Examination of persons suspected. The local board of health shall cause an examination to be made of every person reasonably suspected, on the basis of epidemiological investigation, of having any venereal disease in the infectious stages to ascertain if such person is so infected, and if so infected, to cause such person to be treated. No person shall be subjected to such examination who is under the care and treatment of a physician for the suspected condition. If a person suspected of having venereal disease should refuse to submit to an examination voluntarily, application may be made by the local board of health to the district court for an order compelling such person to submit to examination and if infected, to treatment. Such person shall be treated until certified to the local board of health or, if none, to the state department of health as no longer infectious. In every case of treatment ordered by the district court the attending physician shall so certify that the person is no longer infectious.

140.9 Minors. A minor who seeks diagnosis or treatment for a venereal disease, shall have the legal capacity to act and give consent to medical care and service for venereal disease by public and private hospitals or public and private clinics or physicians. Such medical diagnosis and treatment is to be provided by a physician licensed to practice medicine and surgery, osteopathy, or osteopathic medicine and surgery. Such consent shall not be subject to later disaffirmance by reason of such minority. The consent of no other person or persons, including but not limited to spouse, parent, custodian, or guardian, shall be necessary.

140.10 Certificate not to be issued. No certificate of freedom from any venereal disease shall be issued to any person by any official health agency except as provided by chapter 596.

140.11 Pregnant women. Each physician attending a pregnant woman in this state shall take or cause to be taken a sample of blood of each such woman within fourteen days of the first examination, and shall submit such sample for standard serological tests for syphilis to the state hygienic laboratory of the state university at Iowa City or some other laboratory approved by the state department of health. Every other person attending a pregnant woman in this state, but not permitted by law to take blood tests, shall cause a sample of blood of each such woman to be taken by a duly licensed physician, who shall submit such sample for standard serological tests for syphilis to the state hygienic laboratory of the state university at Iowa City or such other laboratories co-operating with and approved by the state department of health. If the blood of the pregnant woman reacts positively to such test, then, if she is married, the husband and other children by the same mother shall be subjected to the same blood tests as herein provided. If the pregnant woman is single, then the person responsible for the pregnancy and other children by the same mother shall be subjected to the same blood tests as herein provided.

140.12 Blood tests in pregnancy cases. Physicians and others attending pregnancy cases and required to report births and stillbirths shall state on the appropriate birth or stillbirth certificate whether a blood test for syphilis was made during such pregnancy upon a specimen of blood taken from the mother of the subject child and if made, the date when such test was made, and if not made, the reason why such test was not made. In no event shall the birth certificate state the result of the test.

140.13 Medical treatment of newly born. Each physician attending the birth of a child, shall cause to be instilled into the eyes of the newly born infant a prophylactic solution approved by the state department of health. This section shall not be construed to require medical treatment of the child of any person who is a member of a church or religious denomination and whose religious convictions, in accordance with the tenants or principles of his church or religious denomination, are against medical prophylaxis or treatment for disease.

140.14 Religious exceptions. No provision of this chapter shall be construed to require or compel any person, whose religious convictions are as described in section 140.13, to take or follow a course of medical treatment prescribed by law or a physician. However, such person while in an infectious stage of disease shall be subject to isolation and such other measures appropriate for the prevention of the spread of the disease to other persons.

140.15 Penalty. Any person violating any of the provisions of this chapter shall be punished by a fine of not more than one hundred dollars, or by imprisonment in the county jail for a period not to exceed thirty days, or by both such fine and imprisonment.

140.16 to 140.41 Repealed by 63GA, ch 136, Sec. 1.

RECENT LEGISLATION RELATING TO VENEREAL DISEASE EDUCATION AND CONTROL

1. Senate File 126, "An Act relating to the educational program of schools" passed the legislature in the 65th General Assembly (1973-74), and was signed by Governor Ray on April 10, 1974. There are three provisions of Senate File 126 which pertain to health education. These provisions amend current educational standards as follows:

   a. One subsection of the bill stipulates those areas which shall be taught in grades one through six. One such area is "health and physical education, including the effects of alcohol, **tobacco, drugs** and poisons on the human body; **the characteristics of communicable diseases.**"(Bold portions indicate the changes made in the old law by Senate File 126.)

   b. In another subsection, the curriculum standards are amended for grades seven and eight as they are in the above section, with the addition that as a minimum program "venereal disease and current crucial health issues" be taught along with "characteristics of communicable diseases."

   c. Finally, another subsection lists areas constituting minimum standards for grades nine through twelve. A new section is included which reads as follows: "Health education, including an awareness of physical and mental needs, the effects of alcohol, tobacco, drugs and poisons on the human body, the characteristics of communicable diseases, including venereal disease and current crucial health issues." This is an entirely new section.

2. Senate File 157, "An Act relating to the age of consent for venereal disease diagnosis and treatment," passed the legislature in the 65th General Assembly and was signed by Governor Ray on March 4, 1974. Prior to passage of Senate File 157, the law read that "a minor of age sixteen or more who seeks diagnosis or treatment for a venereal disease shall have the legal capacity to act and give consent to medical care and service for venereal disease by private hospitals or public and private clinics or physicians." The bill deleted the words, "of age sixteen or more," thus allowing any minor to consent to his or her own treatment. The following sentence was also dropped: "The physician shall notify the parents of such minor child that the child does have a venereal disease when the results of the diagnosis indicate that the child might communicate the disease to other members of his family."

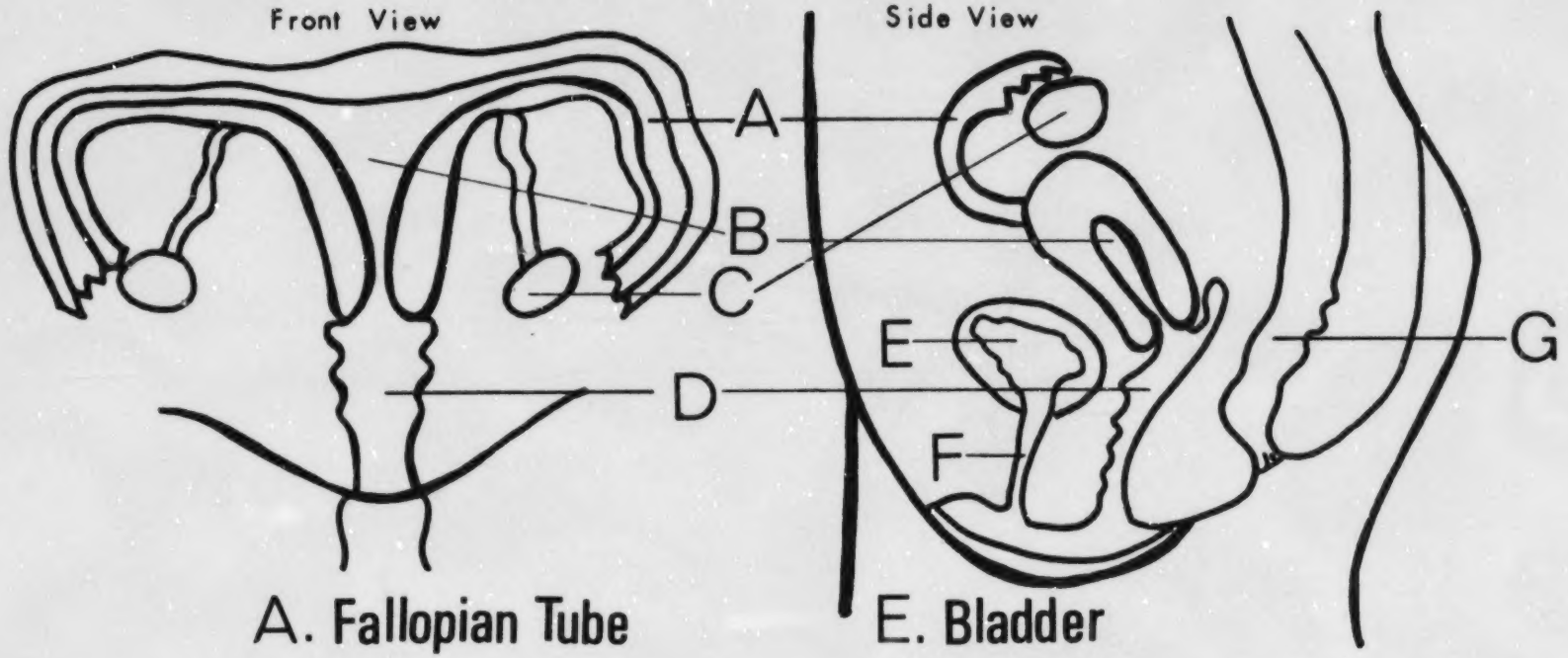
   The law now reads:

   > 140.9 MINORS - - A minor who seeks diagnosis or treatment for a venereal disease shall have the legal capacity to act and give consent to medical care and

service for venereal disease by public and private hospitals or public and private clinics or physicians. Such medical diagnosis and treatment is to be provided by a physician licensed to practice medicine and surgery, osteopathy or osteopathic medicine and surgery. Such consent shall not be subject to later disaffirmance by reason of such minority. The consent of no other person or persons, including but not limited to spouse, parent, custodian, or guardian shall be necessary.

3. Senate File 301, "An Act relating to the sale, distribution or advertisement of contraceptive products, and the regulation and distribution of venereal disease prophylactics and providing a penalty," was signed by Governor Ray on March 4, 1974. The bill makes legal the open sale of venereal disease prophylactics (condoms). It is the responsibility of the Iowa State Department of Health to establish standards for distribution. The new legislation makes possible the sale of venereal disease prophylactics in machines.

FEMALE PELVIS



A. Fallopian Tube

B. Uterus

C. Ovary

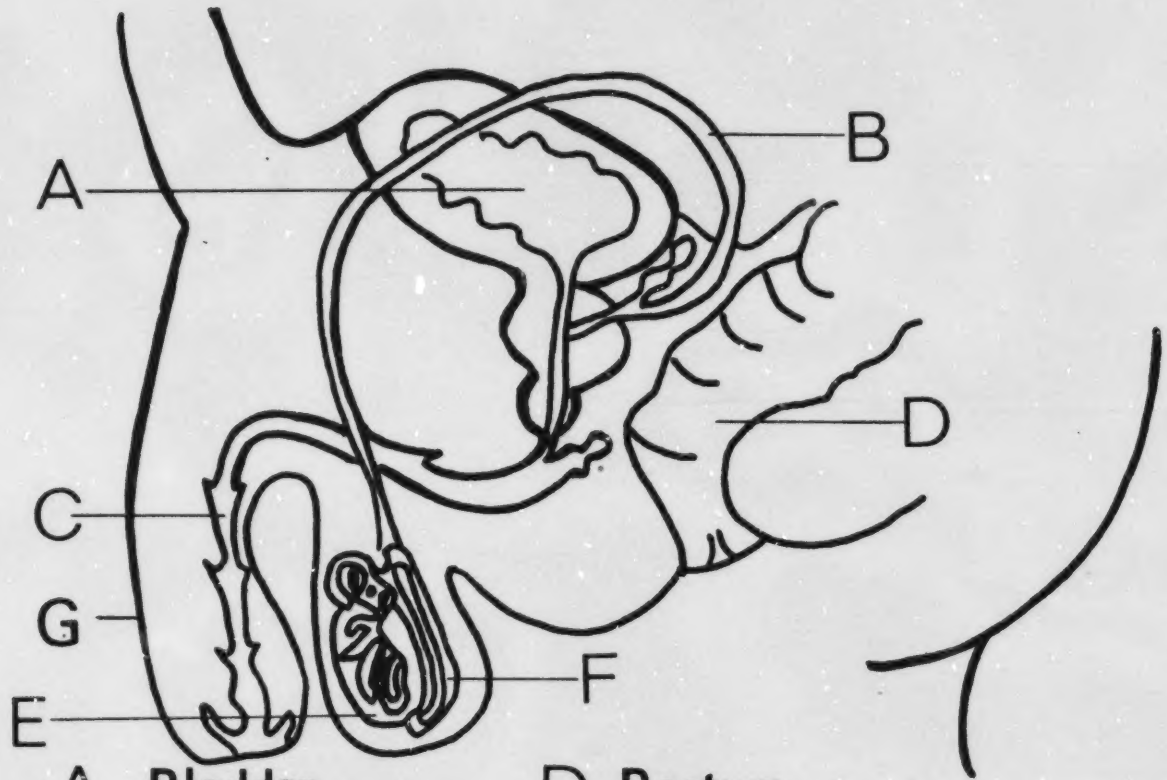
D. Vagina

E. Bladder

F. Urethra

G. Rectum

MALE GENITO-URINARY TRACT



A. Bladder
B. Vas deferens
C. Urethra
D. Rectum
E. Testis
F. Epididymis
G. Penis

seventeen
April 1972

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HERE IS HOW HOTLINES, RUN BY TEENS FOR TEENS, ARE NOW HELPING TO CURB A SERIOUS, NATION-WIDE EPIDEMIC

NEW WAYS TO COMBAT VD

BY ALICE LAKE

"Hello. Operation Venus."

A tall, pretty seventeen-year-old with long brown hair picks up a telephone in a cluttered office in downtown Philadelphia.

Another girl is on the other end of the line. Her voice is low, almost a whisper. Abruptly she asks, "How can you tell if you have VD?"

The tall girl rattles off the symptoms of syphilis and gonorrhea. When she says, ". . . and there may be a vaginal discharge" there is a breathy "oh" from the caller.

"Is this a symptom you have?"

"Yes."

"It could be gonorrhea. Have it checked right away. Can you go to the family doctor?"

The other voice is edged with fear. "No, he'd be sure to tell my parents."

"Well, there are four public health clinics in Philadelphia," the tall girl continues. "Tell me the area you live in, and I'll give you the address of the nearest one. It won't cost anything. If you prefer, we have four private doctors on our list, two of them close to the suburbs. They're free too, and they won't tell your parents."

Telephone conversations like this one have been daily occurrences in Philadelphia since January, 1971, when the nation's first hotline for venereal disease, run by teen-agers for teen-agers, was started. The brainchild of an eighteen-year-old high school senior and a Catholic priest, Operation Venus processed close to 1,500 calls in its first year, more than half from teen-age girls. Most callers apparently took the hotline advice to go to a doctor or clinic for diagnosis, and three hundred found to have gonorrhea were treated and cured.

1

Why is such a service necessary? Because venereal disease, particularly gonorrhea, is now soaring out of control in the United States. Health officials refer to it as a pandemic, a widespread epidemic. Except for the common cold, gonorrhea occurs more frequently than any other communicable disease, with a current rate of one case every fifteen seconds round the clock, and an estimated total incidence of two million new cases a year.

Moreover, the risk of catching gonorrhea is increasing faster for teens than for any other age group, in the suburbs as well as the big-city ghettos. Now "nice" girls get gonorrhea. Experts estimate that in an average high school of a thousand students, at least twenty-five are likely to be infected. In California, where the epidemic is severe, officials predict that in some cities two out of ten high school students will get VD before they gain their diplomas. Yet California is not the worst state. According to the latest statistics, gonorrhea rates for teen-agers are highest in three southern states—Georgia, Tennessee and Florida.

Young people know too little about VD. Their parents are often ignorant and embarrassed, their teachers sometimes misinformed or moralistic. One-third of the nation's high schools do *not* teach facts about it. In some others, it is discussed briefly in such unlikely courses as Driver Education or Religion. It is particularly important for girls to be informed about VD, for doctors are convinced that the young infected female is the key to its control. Her symptoms are often hidden if she has syphilis, and even more often undetected with gonorrhea. Thus she escapes treatment and keeps infecting others.

In the eyes of society, VD is embarrassingly different from other infectious diseases; since syphilis and gonorrhea are caught by intimate sexual contact—usually sexual intercourse—girls who suspect VD seldom tell their mothers or a doctor. They don't know and are afraid to ask where to seek help. They believe that doctors and health clinics will inform their parents, so they worry frantically, sometimes needlessly, and do nothing. Often they are unaware of the one encouraging fact in VD's alarming *(continued on page 158)*

NEW WAYS TO COMBAT VD *continued from page 105*

rise: if treated early and effectively, *both syphilis and gonorrhea can be completely cured.*

The alarming VD story was presented in October, 1970 to a Philadelphia conference on VD Among Teen-agers, which had been sparked by Joseph Chiappa, the city's thirty-two-year-old public health adviser. Among the conferees was Reverend Francis X. Schmidt, director of youth activities for the Archdiocese of Philadelphia, described by young people as "a real down-to-earth guy." He was accompanied at some sessions by Joseph Forish, eighteen, a senior at Northeast Catholic High School, and president of the Archdiocese Community Service Corps. Joe, now a freshman at St. Joseph's College in Philadelphia, is tall, lanky, with light brown hair which keeps falling over one eye. He is self-assured and humorous—far from a solemn do-gooder.

The conference disturbed both Joe and Father Schmidt. It seemed too negative, as if nothing could be done about the epidemic. "Father and I were rapping about the problem a few days later," Forish says. "Before we knew it, the idea of a VD hotline was born." The two hit on the name Operation Venus from the goddess of love, the origin for the word venereal. They sought aid from Joseph Chiappa, and the three turned out to be a bombshell combination. Father Schmidt supplied adult guidance, the telephone and the headquarters—a noisy room in the Catholic Youth Organization building; Chiappa provided the know-how of a health expert; and Forish, the enthusiastic teens to man the hotline.

Although about 125 boys and girls volunteered at first, many (particularly girls) dropped out during the three Sunday morning training sessions run by the Philadelphia Health Department. One of the major reasons was embarrassment. "We did role-playing, mock telephone conversations," Chiappa says, "and some of the participants got flustered, particularly when they had to field questions about homosexual contact. We also ran some rather frank films, showing actual VD lesions on the genital organs, and this turned others off."

The orientation program also included training in VD facts, rap sessions with questions from participants, and advice from a health department worker with telephone-answering experience. (She warned girls, "Don't give your full name, or you may have a persistent caller trying to get a date.")

Dropouts during the summer of young people who landed jobs or went on vacation added to the attrition, leaving a core of about two dozen teens. They turned out to be a practical-sized working force to man the telephones on weekdays from 3:30 to 6 P.M., and from 10 A.M. to 4 P.M. on Saturdays. Forish and his co-leaders—Louanne Tucker and Marie Ward, both seventeen, and Matthew Cronin, sixteen—try to schedule two workers, a boy and a girl, to answer telephones daily.

One of the regulars is Anna Marie Thibodeau, sixteen, a slim brunette who travels an hour by subway and bus once a week to work a full shift as a telephone volunteer.

Recently I listened as Anna Marie, gesturing nervously while she talked, answered the telephones on an average weekday afternoon. Within a half-hour she made appointments for VD tests for two male callers. One had started the conversation abruptly, "I have a bump on my penis. Could it be VD?" Girls called too, but their questions were general—"What is VD?" "What are the symptoms?"

During gaps between phone calls Anna Marie works on a cream-colored shawl she is crocheting for herself and helps out with clerical chores too. On an occasional day there will be only a few calls, but on others she keeps dashing from one ringing phone to another. When Operation Venus receives free radio or TV publicity the volunteers have a hectic time. Soon after the hotline started, an hour-long *Profile VD* was aired in prime evening television time. The Venus switchboard lit up the next day with sixty calls. Posters bearing the Venus motto—"Be Sure—Be Cured"—have also been distributed to high schools throughout Philadelphia, and recently to most of the city's drugstores.

The two keys to Operation Venus are understanding and anonymity. Telephone workers never moralize, even though, as on one recent occasion, a caller may get chatty about the number of boy friends she has slept with in the past month. They never diagnose. When a caller asks advice about symptoms, they say firmly, "See a doctor. We'll help you to find one." In order to encourage the caller to be checked for VD, they stress that the tests are quick and relatively painless. "With many kids there's the problem of inertia," Joe explains. "They figure, 'If I don't think about it, maybe it will go away.' "

Telephone operators try to sound concerned but impersonal. They do not give their names or ask the name of the caller. "The anonymity is the nice thing about the telephone bit," Anna Marie says. "People feel they can always hang up if it gets too rough."

Actually it sometimes gets rough for the young people on the receiving end, especially the girls. Hearing a sympathetic female voice, some boys ask advice about their sex life, and occasionally even become obscene. That's when the Venus worker hangs up. "We're not running a dating service or a lonely hearts club," Joe Forish says.

At first Venus operators were concerned that long waits at the clinic might discourage callers. Girls, particularly, were hesitant because of this possibility. One explained that she planned to dash out while her mother was shopping and just had to get back home quickly. "We were busy working out all sorts of schemes to solve this problem," says Joe, "but they turned out to be unnecessary. The waits just aren't bad at all." Many callers prefer to go to a clinic because of its anonymity, but one girl asked doubtfully, "Is it dirty?" She was assured it was not.

Although the majority of calls are from teens, adults sometimes phone too, and pose knotty problems. One man told Louanne Tucker that he thought he had crabs, and asked about treatment. This stumped *(continued on page 161)* her. "I can answer most VD questions," she says, "but I didn't know what that was." (He was referring to the crab louse, a kind of body louse which infests the pubic hair and moves from one sexual partner to another. It is annoying and itchy, but *not* a venereal disease.)

In about one telephone contact in twenty, the owners of the voices on the two ends of the line may actually meet. Operation Venus offers a "delivery" service for teen-agers who want help in getting to a doctor or a clinic. About sixty callers were driven to their destination in the first year. For some this aid is strictly financial—a round trip on a Philadelphia subway costs seventy cents. Others just need the moral support of another teen.

A pickup point is usually arranged at a busy street corner or a shopping center, seldom the caller's own home, and two of the workers—a boy and a girl—go together in the car. Venus advises its staff, "Never stop if the caller is with a gang or if you anticipate trouble." Recently, because no one else was available, Joe Forish went alone to drive a suburban girl to a doctor for a VD test. "When I arrived, she was waiting on the steps of a girl friend's house, and she was really shook up," he says. "She was so uptight that she couldn't stop talking. She poured out her troubles with her boy friend—how mean he was to her. Her father was a doctor, but she couldn't talk to him at all. It was a real bad scene. I waited while she was in the office—it took only nineteen minutes. When she came out, she was so relieved that she acted like a different person." (Telephone and pickup staff seldom learn the final outcome of VD tests.)

The young people at the telephone notice a marked difference between the boys and the girls who call in. Usually the boys are direct, businesslike. They think they have gonorrhea (which they refer to as "the clap," "the drip," "a strain"), and they want to know exactly what to do about it. Girls are often hesitant, embarrassed. They are more fearful, and their fears are diffuse. One girl, who telephoned a few days after her first sex experience, was almost hysterical with worry that she was pregnant and had VD. Another was guided to a doctor for diagnostic testing, although, as it turned out, she was still a virgin. Some try to pretend that the information they seek is for a girl friend or a school report.

A frequent question from girls is, "If I have VD, should I tell my boy friend?" Boys voice the same concern. The answer from the telephone squad is an emphatic yes. They try to make it clear that if a boy or a girl is cured of VD

and then returns to an infected sex partner, he will simply get the disease all over again. Although VD spreads fastest through promiscuous sex, one member of the telephone squad says, "I don't get the impression that most of the girls who telephone are promiscuous. They talk as if they have only one boy friend. The problem is that if you have VD, everybody assumes you're running around."

Teens on both ends of the line seem quick to establish a natural rapport. Callers trust their peers, although almost all make it clear that they do *not* trust or expect understanding from their parents or the family doctor. The major difficulties which have arisen for Operation Venus have been caused by adults—parents, teachers, doctors. Several telephone workers have had to battle with their shocked parents in order to participate, and one girl was ordered by her parents to leave the program when they learned of its purpose. "My mother took a moral stance," says one seventeen-year-old worker. "'Kids who get VD deserve it, and you shouldn't help them,' she told me. But she didn't actually forbid me to join."

Eventually some parents become enthusiastic boosters of the program, or at least stop treating VD as a dirty word. "My parents' attitude has changed," Marie Ward says. "They just never would mention VD before."

The program has also drawn flak from school officials, some of whom think parents should be informed if their child receives VD treatment. "We've had to explain to a few school principals," says Father Schmidt, "that the program would collapse if parents were told. They don't realize that Pennsylvania law now permits a minor to be treated for VD without parental permission." Some principals have objected to prominent display of the Operation Venus posters, afraid that visitors to the school might complain. Instead of tacking up the Venus publicity on a main corridor bulletin board, one principal insisted that the school secretary type up the pertinent facts on sixty-four unobtrusive index cards, which were then placed in each classroom.

Some doctors have been skeptical whether teen-agers can get the facts right on so delicate a topic as VD. Some have even tested the workers by phoning the hotline number and asking for information. After one medical student peppered Marie Ward with questions, he said admiringly, "You've given me more information than I get in class."

Once word gets around at school that a girl is a walking information center about VD, she's usually buttonholed in the halls or pulled off to a quiet corner at lunch time by worried schoolmates. Even teachers, assigned to conduct a class on the subject, ask a Venus worker for the latest information. Some schools have invited the program leaders to speak to students in their classrooms or in assembly programs. "I was nervous at first," admits Louanne Tucker. Her worst experience came when she and Joe Forish started to speak to a group of 1,200 seniors who seemed to regard venereal disease as an uproarious joke. "I thought we'd get fed to the lions," Louanne says. "Those kids can just tear you apart. But when our time was up, they didn't even want us to stop."

Many of these young experts have started to wage a private war against widespread misinformation about venereal disease. On one occasion, Marie Ward heard the school nurse, addressing students over the loudspeaker, remark that over 90 percent of the persons who contract VD are under the influence of alcohol. "The kids in the class all wanted to know if that was true," she said. "I didn't think so, and I checked and found I was right. So I quietly told the nurse."

The Operation Venus program is being hailed by national venereal disease experts as a fresh and effective new approach to a serious epidemic. "I feel this is a first-class example of youth serving youth," Dr. Bruce Webster, president of the American Social Health Association, declared recently.

Last spring the ASHA asked Joe Forish to come to St. Louis to address an international VD symposium which it was sponsoring. The only teen participant, Joe was also the only one to receive a standing ovation from his audience. A local newspaper headlined his appearance: "Youth Turns Tables on Physicians; Gives Them Advice About VD." Later one admiring health worker commented, "We keep saying that if we only had a few more million dollars, we could lick VD. Now these kids are doing the job on a shoestring."

National publicity followed the St. Louis conference, and Operation Venus received inquiries from six state health departments on how to set up similar programs. Now six more Venus programs are in operation, and several others are in the talking stage. Cities with programs include Lexington, Kentucky; Biloxi, Mississippi; Washington, D.C.; El Paso, Texas; Oklahoma City, Oklahoma and Montreal, Canada. The two Joes—Forish and Chiappa—flew down to Lexington, Kentucky last spring at the request of Fayette County Judge Robert Stephens, who was deeply concerned that Lexington's VD rate was the highest in the state. They spoke to a meeting of teenagers, doctors and health officials. In June Lexington's Operation Venus answered its first phone call. Two students were recruited from each high school and junior high; headquarters were provided by the YWCA, and telephone lines by the county government.

In Mississippi, an Operation Venus started in September, 1971 in a three-county area covering the Gulf Coast from Pascagoula to Bay St. Louis. Headquarters in the Biloxi Community Center are manned by about fifteen teens, with the Reverend Francis Cosgrove as adult adviser. Joe Forish and a group from the Philadelphia program went to Mississippi to provide guidance.

Although Operation Venus has a simple practical goal—helping young people with VD to be treated and cured—Joseph Chiappa, who continues to work closely with the Philadelphia group, feels that it has broader implications too. "I've noticed a change in attitude, especially among young people," he says. "They're complaining that health workers overdo the secrecy bit. They want a VD clinic to be called by its name—not disguised under a euphemism like 'Social Hygiene clinic.' Through their influence older people are beginning to open up. The idealism of these kids has renewed my faith in the possibility that at least syphilis can be eradicated. When I work with adults, they always keep asking, 'Why?' Young people ask, 'Why not?'"

Note: If you want to start a VD hotline in your town, write for advice to Joseph Forish, Operation Venus, 1620 Summer Street, Philadelphia, Pennsylvania 19103.

For VD information call toll free (800) 523-1885 from anywhere in the United States except Pennsylvania. Pennsylvania residents call (215) LO 7-6973.

Youth's View of the Venereal Disease Crisis

PRESENTATION TO THE GOVERNOR'S TASK FORCE AGAINST VENEREAL DISEASE

By Tim Franson, Drake University College of Pharmacy

November 2, 1973

I thank the committee for giving me the opportunity to express concern of youth today in this area.

I hope to convey to you the sincerity and concern the men of Kappa Psi have in this area, and how we approach the matter of educating the public.

Perhaps a background is first necessary to understand why our pharmacy group is involved in these presentations; and more so why we feel our efforts have been effective.

Kappa Psi Pharmaceutical Fraternity is a group of fifty nine male pharmacy students engaged in a professional coalition that endeavors to utilize educational background for community service — by giving presentations in the areas of venereal diseases, drug misuse, and poison prevention.

The curriculum at Drake College of Pharmacy allows students to gain information in the areas of drug action, treatment of venereal diseases, microbiology of organisms, sociological factors, and other related realms. In addition, our group sponsors in-service training sessions and guest lectures to adequately prepare us for our speaking roles. Several Drake professors have been instrumental in boosting our program, and Mr. Robert Harrah's office has been of great help in our initial procedures.

I believe these factors illustrate that we have sufficient preparation to speak to community and school groups, and we specifically gear each presentation to the age group to which we are speaking.

Let me emphasize that our forte relates to three specific points:

1. expertise,
2. as an information source, and
3. our age and straightforwardness.

Kappa Psi has come to the conclusion that our role in fulfilling these responsibilities is based on the belief that control of venereal disease will come only through proper education of the public.

To this end, we strive to make our talks factual and as non-chastising as possible. We wish this problem to be dealt with in a professional, straight-forward, and intelligent manner, as I'm sure you all do.

You must realize that our speakers are 19 to 23 years of age-members of the prime incidence population. We have achieved best results in talks to high school and college youth, because there is certain peer trust that exists. This rapport forms an atmosphere conducive to these young people speaking with us about their personal problems and hang-ups with V.D. We do spice our talks with humor, for levity aids in bringing the information across in a casual rather than somber manner. We also avoid the coat and tie image, because kids don't want to be talked down to.

We indulge in no moralizing or point no incriminating fingers, but stress that it is the responsibility of the INDIVIDUAL to undertake rational action when properly informed. Young adults today are turned off the minute someone breaches discussions of promiscuity and why it is wrong. They want to hear the facts: where to go when they contract V.D., how to recognize it, and how to prevent it. There is still the fear of ostracism by peers, but scare tactics are not indicated. Each person has to be reassured that treatment will be a private matter, without chastisement, but with understanding.

The epidemic will be stemmed only with the abolition of ignorance concerning this topic-or perhaps we should say-through the acquisition of proper information.

Our presentations usually involve three speakers, one each in the areas of:

1. sociology and general information,
2. gonorrhea, and
3. syphilis.

We go through disease processes in simple terms, describing the ease of drug treatment, preventative measures, and signs of recognition for the layman. A discussion is also conducted of disease progression, secondary manifestations of each disease, congenital involvement during pregnancy and childbirth, and we take special care to cover the common misconceptions surrounding venereal diseases that must be dispelled. You would be surprised by the number of young women we have spoken to who believed that birth control pills would prevent the contraction of these afflictions, as well as other prevalent misinformation we have heard from Des Moines area youth. Certainly the only way to reply to a person who thinks he contracted V.D. from a toilet seat is that it's a hell of a place to take a date.

We also employ the use of visual aids, such as illustrations and statistics to give more perspective to the issue, and mention referral sites where a person can receive appropriate care and further information. Stress is made of the clandestine nature of treatment, which seems to be a troubling consideration for many.

During discussion, we point to the need for information from the individual being treated of all sexual contacts during the suspected period, not for the purposes of vengence or public disclosure, but to preclude the occurrence of further spread of disease and secondary manifestations in unsuspecting contacts. One prime example here, of course, is the asymptomatic female with gonorrhea.

Following the presentation, we remain for 15 to 20 minutes, so people afraid of asking questions in front of others have the oppurtunity to ask privately about their concerns.

I will now delineate several of the specific projects our group has undertaken.

Presentations, as I have just outlined for you, have been given to First United Methodist Church, Esther Boarding Hall for working girls, Saydel High School, Woodward High School, Norwalk High School, and First Lutheran Church of Galesburg, Illinois over the past year.

We anticipate talks to Drake sororities in the near future, and will be speaking to the Newton Women's Club this week.

In addition, we are now preparing 5 minute tape recordings to be filed in Cowles Library at Drake. Students will be able to dial in to these tapes, listening in the privacy of a booth to a capsule report on symptoms, treatment sites, and general information similar to what we give in our talks.

On April 14, 1973, Kappa Psi sponsored a venereal disease symposium at Drake. Invitations were sent to nurses, physicians, pharmacists, nursing students, and pharmacy students from five states. Nearly one hundred persons were in attendance.

Our morning sessions involved speakers in the areas of microbiology, treatment, prevention, and prevalence and control of venereal diseases. The speakers were: Dr. Stephen Elliott, professor of microbiology at Drake; Dr. Marvin Borsand, MIDAC medical director; Dr. John Doran of McFarland Clinic; and Mr. Robert Harrah, director of the Venereal Disease Division for the Department of Health.

Afternoon sessions centered on discussion groups, with topics such as "The Role of the Young Adult in Peer Education". Mr. Harrah and his staff were again helpful by providing information packets as well as speaking.

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Youth's View of V.D. Crisis

I might also add that due to the impetus of these presentations, pharmacy students who attended from South Dakota State University are now beginning their own V.D. program.

Now you may ask the reason for sponsoring such a gathering. Our purpose, pure and simple, was to EDUCATE THE EDUCATORS. We have a variety of capable professionals who can and will speak to groups about venereal diseases. The intent was that the background from our format would serve as a springboard for these efforts.

In this vein, our group is attempting to set up a cooperation with education students at Drake. We hope to have V.D. Education sessions included in their course work, so that these future teachers will have an adequate understanding, and be able to help youth cope with the problems of venereal diseases in an open manner.

I'm sure you can see that we believe education at the personal level is a very effective means of facing our mutual dilemma; and that VOLUNTARY COMPLIANCE by the public will be a major factor in coming closer to an ebb in the epidemic.

We are concerned as professionals and citizens, and must all take an active, not passive, role in the vanguard for control. Obviously, we must participate in cooperative efforts to stem this "plague of love". Our group is anxious to aid mutual endeavors in any way possible, and we hope you agree that personal presentations to school and civic groups constitutes a very effective mode for reaching the public. We must communicate with the people of Iowa one-to-one to be successful in preventative and treatment measures.

Kappa Psi realizes we are only a small portion of the manpower necessary to disseminate information on a "grass roots" level. Through self-training and by virtue of our curriculum and concern, I believe the men of pharmacy will continue to supply aspiring young professionals who constitute a reservoir of manpower, dedicated to conscientiously furthering the fulfillment of health care needs in Iowa. We must work toward this end together, so that the youth of today and tomorrow, the consumer in the V.D. market, has the opportunity to get the straight facts and treatment without chastisement. Thank you.

Editors Note: The role and involvement of pharmacists in public health education and particularly as related to V.D., was emphasized and acknowledged at the first meeting of the Governor's Task Force Against V.D. by comments made by Tim Franson published above. Tim did an outstanding job not only in his formal statement but extemporaneously, one that every pharmacist can have pride in. Also during this first meeting, Ann Weir, staff of the Department of Health Venereal Disease Control office, in reporting on V.D. public education activities, gave primary reference to the IPhA V.D. Awareness Month conducted by the Association in February, 1972 and to pharmacy's national activities to provide education regarding V.D.

One discouraging note however, is the fact that the Governor's Task Force at its December 7 meeting voted to support passage of SF 301, to legalize distribution of prophylactics via vending machines. President Gill Hartliep, as a member of the Task Force, found it difficult to overcome the strong support for this action, even with the support of Bishop Maurice J. Dingman, Des Moines Catholic Diocese, who argued against SF 301 from a moral point of view. The following statement of the Department of Health was adopted by the Task Force —

"It is the position of the Iowa State Department of Health that Senate File 301 is worthy of becoming the law of the state since easy accessibility to mechanical prophylactic (disease prevention) devices increases the probability of use. This could result in a decrease in the incidence of venereal disease. In light of the serious epidemic of venereal disease in Iowa, we respectfully request that consideration of this matter be weighed in favor of its disease control potentialities. Our position does not imply endorsement of another characteristic of the condom, that of contraception."

The only way for SF 301 now to be defeated, and it is an extremely badly written bill and will not provide adequate regulation and enforcement to insure the availability of quality products under conditions of good taste and without encouraging promiscuity, is for all pharmacists to personally visit with their legislator and ask that they vote against SF 301. It is in your hands.

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IOWA STATE DEPARTMENT OF HEALTH
Venereal Disease Division
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Voluntary Disaster

That's one way to describe the spread of venereal disease, which health authorities say has reached the epidemic stage in Iowa.

By Sherry Ricchiardi

IF 6,000 cases of polio occurred in Iowa, the public would be terrified, but the fact that 6,186 cases of venereal disease were reported in 1972 hardly raised an eyebrow.

(According to a national survey, only 20 per cent of syphilis and 40 per cent of gonorrhea cases are reported, which skyrockets the VD rate in Iowa to a probable 12,000 cases. Gonorrhea and syphilis are the two most common types of venereal disease.)

Iowa, along with the rest of the country, is in the midst of a VD epidemic that is taking a terrible toll among young people. Ninety per cent of all reported cases here last year hit the below 30 age group.

Nationally, VD is number one among all reportable communicable diseases, and it can spread like wildfire if not properly checked. Yet, because of its direct connection with sexual activity, it long has been shrouded in secrecy.

Many Iowa public health officials feel that accurate information on control and treatment of VD too often is smothered in morality that says, "Nice people don't get it." Yet venereal disease among teens representing all income groups has doubled in the past decade.

There is a definite need, according to most VD officers, to emphasize the human and family problems associated with VD contact because as one health official put it, "We have to blow the lid off this thing if we are ever going to beat it."

INTERVIEWS with Iowa youngsters being treated for VD in county health clinics reveal how they are coping with the disease. They showed an obvious lack of knowledge on the topic. Most of them said, "We never thought it could happen to us."

Here are three cases:

Eighteen-year-old Joyce didn't suspect she had gonorrhea until her boyfriend told her.

"He told me I had it after I gave it to him," she says. "He had it once before, so he knew what it was all about."

Joyce had the disease for five months before it was treated. Her contact was a man whom she met in a bar. They had sex, she never saw him again.

"I wouldn't have guessed he had it. It just didn't seem like something that could happen to me," she says.

Joyce admits her information about VD is limited.

"I don't know much about it, mostly just what I've heard from the kids. My parents never talked to me about sex. I found some articles in a magazine once and asked mom to explain them to me. She was shocked and told me to throw them away. She said I would find out when I got married."

Did she plan to tell her parents?

(Under Iowa's confidentiality law, the files of all those over 15 are secret information.)

"I think my dad would understand, but my mother would blow her top because I had sexual relations. I don't think parents want to understand kids, at least mine don't."

JANE, 19, was turned in as a syphilis contact by an older man with whom she'd had sexual relations. Married, with five children, his relationship with

Reprinted with permission from the Des Moines Sunday Register, January 14, 1973, page 1-E.

her lasted only a month.

"I was shocked when the health people called me," says Jane. "I never gave syphilis a thought, then all of a sudden they said I had it."

Since there was no way to tell exactly when she contracted the disease, Jane named her sexual contacts for the past year. She remembered at least 14; a few were married men, most were college students. There was no sure way to tell how many she had infected.

Asked if she ever had access to VD information, Jane said, "I remember my PE teacher talking about it once, but I just never worried about it."

Stan, 20, met a girl at a college party. They spent the night together, two days later he showed definite signs of gonorrhea.

"I knew the symptoms because I studied VD in a college health class. I couldn't get to the clinic fast enough once I realized I might have it," he says.

"I'm worried that this chick will infect a lot of other guys. I don't even know her last name, so the health officer can't track her down."

ACCORDING to Kent Forbes, Polk County communicable disease officer, Iowans don't take VD seriously enough.

"If we had the same caseload of rubella in our schools as we have VD, we'd be sending home flyers to every parent telling them what symptoms to watch for," he says.

"VD is a touchy subject because it is directly related to sex. The moral values of some parents and teachers stand in the way of allowing VD to be treated like any other communicable disease."

Polk County accounts for one-third of Iowa's VD; Scott County ranks second.

The fact that VD is morally objectionable to many people doesn't make it any less dangerous.

Gonorrhea can produce chronic arthritis, pelvic infection (which eventually can require a hysterectomy) and damage to the sexual glands. It has been known to cause eye and heart disease and encephalitis.

Syphilis can produce insanity, blindness and deafness. It can cripple the fetus of a pregnant woman.

Many Iowa health officials and medical personnel are concerned that the moralizing that often accompanies discussions of VD will hurt their efforts to curb the disease.

A Story County health official says, "The young are free to have sexual intercourse with anyone they choose. Showing disapproval or giving moral lectures won't stop them. But candid discussion of VD may help stop the epidemic."

FRANK Koontz, assistant director of the state hygenic laboratory at the University of Iowa, Iowa City, and associate professor of preventive medicine, has given 250 talks on VD in 72 Iowa junior and senior high schools. He refuses to moralize the issue.

"The first thing the older generation has to admit is that, whether they like it or not, kids do have sex. So they better make sure the youngsters have the appropriate information to keep them from ending up pregnant or infected with VD," he says.

"We must treat VD as a disease and nothing more. It is nothing to be ashamed or proud of. If a person has it, tough break. The only thing to do then is get it cured."

When Dr. Koontz came to Iowa in the mid-60s, "the lid was on VD." The only talks he was asked to give were to medical and dental students.

"This was a ludicrous situation," he says. "The only ones getting VD information were the public health people. Those who needed it were kept in the dark. It was assumed that if we told people how to prevent VD, we actually were telling them to go out and swing with sex."

He adds, "Kids have a right to know that sexual play has a hooker on it. They should be informed what the hooker is, what it can do to them if it's not treated, and where they can find the necessary medical help."

Dr. Koontz gets the most flak about his talks from parents who feel sex education belongs in the home.

"They say it should be taught at home, but just talk to the kids and you'll see that it isn't being done. The schools have a captive audience. Students are already receptive to new ideas or they wouldn't be in school."

Commenting on the fact that gonorrhea is more easily detected in men, Dr. Koontz describes it as a "cash and carry disease."

"A guy gets it on Friday, he says, "and usually by Monday he gets a painful, burning sensation when he urinates. But women are asymptomatic. They can harbor the disease for a long time before it is detected."

As for syphilis, the more serious of the two diseases, he says, "Kids don't recognize symptoms easily as they do with gonorrhea.

"Most people don't connect a sore that shows up in January with a score they made in December. Once the sore goes

V.D.—

Please Turn to Page Four

Iowa Health, Other Agencies Launch Campaign on VD Information

VD--

Continued From Page One

away, they are relieved. They don't realize it will show up again."

(Signs of syphilis don't appear until three to six weeks after contact, then disappear after a few weeks. Even after the secondary rash disappears, the infection remains and begins to do serious bodily damage.)

Dr. Koontz says the three most common myths about VD are that it can be obtained from inanimate objects such as toilet seats or doorknobs; that it can be transmitted by animals, especially sheep, or during a woman's menstrual period.

Some innovative teachers are making attempts to integrate VD education into health and science units.

Herbert McCaw, a biology instructor at Des Moines' Lincoln High School, approaches the topic near the beginning of the term when the textbook mentions syphilis.

"I usually get into it when we start the study of bacteria. This opens it up to just about anything I want to do in the way of tapes, films or speakers," he says.

Mrs. Patricia Schwartz who teaches personal and family living at Lincoln High School says she has been teaching VD facts for the past 10 years.

"Most home economics teachers in Des Moines schools teach a unit on VD," she says.

In spite of the education, she feels that some students don't take venereal disease seriously.

"Many students don't believe what we tell them. They feel it just can't happen to them," she says.

"I even have had boys in class who are proud they've gone through the VD clinic for treatment. I've had a couple brag to me that they got it from the same girl on the same night.

"I try to impress upon them that they have a responsibility to let the girl know so she can be treated. Women don't have the definite symptoms men do."

Map shows the reported cases of venereal disease in Iowa for 1971. Total number of syphilis cases is listed at top, gonorrhea at bottom in each county.

IOWA'S Public Health Department along with other concerned groups are making a big push to disseminate VD information to the public, particularly to youth.

The Iowa State Committee for School Health Education went on record in 1972 supporting legislation that would make health education, including VD, mandatory in all Iowa schools beginning in sixth grade.

Polk County's Mid-Iowa Drug Abuse Council (MIDAC) and Youth Line are cooperating in a three-phase attack on VD.

Groups co-sponsoring the project include the state health department, the Polk County Health Department's communicable disease division, and the College of Osteopathic Medicine and Surgery's community medicine department.

- Phase one was a VD testing and information center at the Iowa State Fair last year.
- Phase two involves the training of 110 Youth Line telephone counselors on VD information and referral.
- Phase three will send a large number of VD volunteers into central Iowa to distribute information to private households.

Fourteen billboards with information advertising VD telephone counseling are scattered throughout central Iowa. They are financed through the Polk County board of education.

Bob Harrah, director of the VD division of the state health department, reports

PHOTO BY CARL VOSS

Fourteen of these billboards, financed by the Polk County Board of Education, are scattered throughout central Iowa.

his office is cooperating with a national medical corporation which is underwriting the cost of VD education through the use of special health units including films, pamphlets, and tapes.

Des Moines will be one of the first cities in the country to utilize the program beginning this month.

New federal funds will be used by the state health department to send representatives into counties to aid in VD treatment and control.

"As a result of new monies, we are trying to give the entire state the intensive coverage that only some of Iowa's counties have been able to afford in the past," says Harrah.

"Representatives will help refer patients for treatment and track down contacts. All this will be done tactfully and confidentially because that is the only human way to go about it. It makes no sense to go around embarrassing people who have VD. Anyone involved in sexual activity can get it."

The state aims to curb this problem by making local representatives available to assist patients. They also will provide drugs free of charge to physicians for VD treatment.

Scott County, with the second highest VD rate in the state, has limited facilities and man power for diagnosis and treatment.

The county clinic only is open for VD treatment 3 hours a week, and Tom Dickey, a representative of the Scott County Health Department, is the only employe available to talk to groups about venereal disease.

"I've talked to everybody from college and high school students to a gay liberation group," says Dickey, who is concerned that his one-shot lectures aren't doing the job.

"There doesn't seem to be a lot of VD education going on in our schools," he says. "If there is, I haven't heard of it or seen it in action."

Dickey feels the Scott County problem will be licked only after a fulltime clinic is in operation and after the proper information is in the hands of all those who need it.

IOWA'S RURAL areas, where there is often a lack of public health services, pose special problems for VD victims.

Many who live in small towns find it embarrassing to visit a family physician.

Some end up going to a doctor in a nearby town or delaying treatment until permanent physical damage occurs.

VD True-False Test

ANSWER the following true-false questions to test your knowledge of venereal disease.

1. The first sign of syphilis usually is the appearance of a painless sore on or around the sex organs.

2. The sores and rashes of syphilis will go away even if the person is not treated for the disease, but the disease itself will not disappear.

3. If a pregnant woman has syphilis, she can transmit the disease to her unborn child.

4. If syphilis isn't found and treated, it may cause insanity, blindness, crippling, even death.

5. Some of the people who have syphilis may never have had any of the signs and symptoms of the disease.

6. Syphilis and gonorrhea are different stages of the same disease.

7. The germs which cause venereal disease can exist a long time outside the body.

8. There is a vaccine available against venereal disease.

9. If a person has syphilis once, he can never get it again.

10. Both gonorrhea and syphilis are frequently acquired by contact with toilet seats, drinking cups, lipstick and towels.

The first five statements are true, the last five are false.

Poster from UGF—Washington, D.C.

VD: THE EPIDEMIC

The coach was baffled. After a succession of winning seasons, his Los Angeles high-school football team had suddenly gone sour. During practice, the players barely limped through their wind sprints and the tackling dummy gave out more punishment than it got. Saturday after Saturday, linemen failed to open holes, and when they did, the backs had trouble finding them; pass receivers were chronically late getting downfield and tended to zig when they should have zagged. At midseason, the team had lost three games in a row.

The reason for the squad's mysterious deterioration didn't emerge from locker-room chalk talks, but from some dramatic medical detective work. One player, complaining of swollen testicles, went to a public-health clinic. The diagnosis: gonorrhea. Soon, investigators found that 48 boys and girls—including nine members of the team—had contracted the disease. All were quickly cured by penicillin and the team came out of its slump and started winning again.

Unlike the coach, public-health doctors in Los Angeles find little to cheer about in the happy conclusion of the case. If venereal disease keeps climbing at the present rate, fully one in five of the city's high schoolers will have contracted gonorrhea or syphilis by the time they graduate. And what's happening in Los Angeles is happening almost everywhere. For the fact is that the entire nation is in the grip of a VD epidemic of unparalleled proportions—and no one at any level of society is immune.

"This is by no means a class phenomenon," says Dr. John Grover, a Harvard gynecologist who is actively involved in the VD campaign. "We have treated doctor's wives, bank president's wives, the daughter of the professor as well as the daughter of the milkman." Even some clergymen have been afflicted, and in San Francisco, Michael R., a young lawyer and discreet man about town, found out the hard way that VD has come a long way from the ghetto. "VD doesn't have anything to do with being 'nice' any more," he says. "The girl I got the clap from is a lovely person—she was sleeping with one other guy and figures he gave it to her."

As infectious diseases, syphilis and gonorrhea are outranked in incidence only by the common cold; and VD is now first among the so-called reportable communicable diseases, for the number of cases each year exceeds those of strep throat, scarlet fever, measles, mumps, hepatitis and tuberculosis combined. This year, 624,000 new cases of gonorrhea will be reported. But an estimated four cases occur for every one reported, so the real figure is more than 2 million.

For syphilis—which untreated can lead to insanity and death—the figures are even more disturbing. There are half a million Americans with untreated syphilis today, and this year their ranks will be joined by 85,000 new cases. The number of new syphilis cases currently being reported represents an increase of 16 per cent over last year, the biggest jump in two decades.

VD, not surprisingly, strikes hardest in the cities. While there are 12 cases of syphilis for every 100,000 persons nationwide, Newark ranks first among cities with 124, followed by Atlanta and San Francisco. For gonorrhea, the national case rate is 308 per 100,000 population.* But in the Atlanta area the incidence is an astronomical 2,510 and in San Francisco, 2,067. Fully 6 per cent of the women having babies at one major hospital in Los Angeles had gonorrhea.

From City to Suburbs

And VD is moving rapidly from the inner city to outer suburbs. Mike Moy, a 27-year-old investigator for the Oakland County (Mich.) Health Department, has his hands full tracking down gonorrhea and syphilis in the affluent Detroit suburbs of Bloomfield Hills, Birmingham and Southfield. "This area," he notes, "has as big a problem as anyplace else." The gonorrhea rate quadrupled between 1969 and 1970 in Arlington, Va. In Prince George's County, Md., a major bedroom suburb of Washington, D.C., it has increased fivefold in the last decade.

VD is particularly rampant among young Americans. At least one in five persons with gonorrhea is under 20. Last year, more than 5,000 cases were found among youngsters between 10 and 14, and 2,000 among children under 9. "The probability that a person will acquire VD by the time he's 25," says Dr. Walter Smartt, chief of the Los Angeles County Venereal Disease Control Division, "is about 50 per cent."

What makes this horrendous state of affairs hard to comprehend is the simple fact that both syphilis and gonorrhea can be cured with penicillin and other antibiotics. After 1947, the number of cases

*Though the VD epidemic is worldwide, the gonorrhea rate in the U.S., according to latest figures, is markedly higher than in such Western European nations as Britain (118 per 100,000) and France (30 per 100,000). But in the comparatively more permissive Scandinavia, the national average is much higher than in the United States. Denmark, for instance, reports a rate of 319 per 100,000 and in Sweden the rate is an astonishing 514 per 100,000—higher even than it is in California. Only in Communist China is the VD rate down appreciably. There, thanks perhaps in some measure to Chairman Mao Tse-tung's puritanical thoughts on promiscuity and prostitution, VD seems to have been all but eliminated.

dropped steadily for a decade through the use of these drugs. Then a vast blanket of complacency settled down over government, the medical profession and the public. Funds for VD control dropped off, and VD began its stealthy climb up the statistical ladder. "They provide money when the statistics are high, when you're getting a lot of syphilis for your money," Myron Arnold, a District of Columbia VD-control adviser, notes wryly. "When the cases begin to drop, they cut out the funds instead of seeing it through to completion."

No Worse Than a Cold

The complacency is shared by the VD victims themselves. "It's no worse than having a cold," says a Hollywood 19-year-old, in an unconscious echo of an old street cliché. "You just lay off balling until it goes away." Another youth shrugged off the advice of doctors at the Fairfax Clinic, a Los Angeles public-health unit that ministers to more than 2,000 VD victims a year, on ways to prevent recurrences. "I'm usually too stoned to care," he said. VD victims who don't follow doctor's orders become repeaters. One youth who had been to the Fairfax Clinic on three occasions kept taking only half the antibiotic pills he was given and selling the other half in order to spare his friends the trouble of a clinic visit. As a result of the inadequate dosage, no one was cured.

Nowadays, the old B-girl-meets-lonely-sailor picture of how VD is spread is as passé as an album by the Andrews Sisters. In fact, most public-health experts credit prostitutes with being unusually conscientious about avoiding VD and seeking treatment if they do contract it. Only 2 per cent of the VD patients treated in St. Louis clinics are prostitutes. "Prostitution is not where it's at with VD today," says Robert M. Nellis, an investigator with the San Francisco City Clinic. "It's Johnny next door and Susie up the street."

Public attitudes toward VD range from ostrich-like ignorance to downright repugnance and help make the current epidemic worse. "We even have doctors who don't want to treat or have anything to do with VD," says Phillip Wactor, director of VD control for the Illinois Health Department.

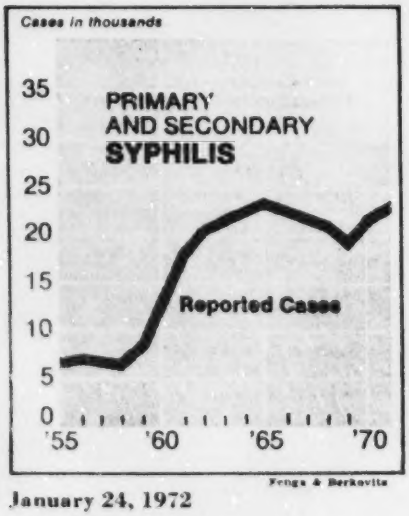
To a good many public-health officials, the root causes of the VD epidemic can be crisply summarized by the "three P's—the Pill, promiscuity and permissiveness." By virtually removing the fear of pregnancy, so the argument goes, the Pill has encouraged greater sexual activity—particularly among the young. At the same time, it has reduced the use of condoms, one of the most efficacious barriers to the transmission of VD. Moreover, researchers note, the hormones in the Pill increase the alkalinity and moisture of the female genital tract, favoring the rapid growth of gonorrhea bacteria. According to one estimate, the risk of contracting gonorrhea for a woman engaging in a single act of unprotected intercourse with an infected partner is 40 per cent; for a woman taking the Pill, it is almost 100 per cent.

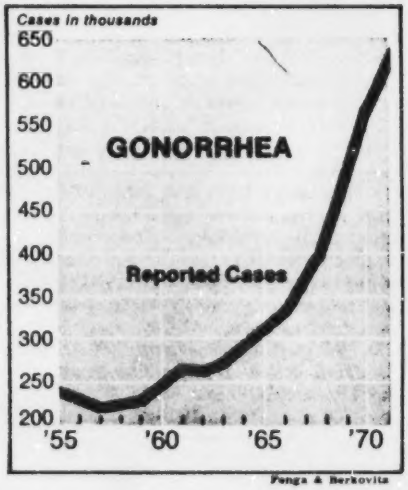
Whether promiscuity is too strong a word, the life-style of large numbers of young people includes plenty of sex and lots of mobility—just what it takes to keep a VD epidemic going. "Let's face it," says Dr. Joshua Seigel of the Hollywood-Wilshire Clinic, "if you walk across a freeway once, you're less likely to get hit than if you walk across it ten times." "One day they're in San Francisco, the next week L.A., then on to Denver," notes Jan Cobble of the Bay Area Venereal Disease Association.

She Got It From a Friend

A case in point is Donald, the bearded 25-year-old resident of a Sonoma Valley commune, holding his eleven-month-old daughter on his hip as he waited his turn in the San Francisco City Clinic. He readily admits he contracted gonorrhea from his wife who had brought it back from a trip to New York. "She got it from a friend of mine she was staying with," says Donald, matter-of-factly. "He wrote and suggested she get a checkup; she's coming in for shots, too." At free clinics set up to serve the subculture, like the Ark in Chicago or the Medivan that patrols the streets of Boston and Cambridge, the clientele is young, and VD is high on the list of complaints. "Health pollution has become an accepted way of life for a certain number of young people," says Dr. John R. Pate, chief of the District of Columbia's VD-control division. "You take the good along with the bad." Health pollution includes many disease problems. The San Francisco City Clinic concentrates on treating VD because most of the city's smaller clinics are overburdened with drug users. "I go to the Haight clinic when I want to rap or when I'm strung out," says a pretty brunette in a peasant skirt and boots, "and I come here when I have VD."

Promiscuity has certainly played a part in the rising VD rate among the burgeoning homosexual population, male



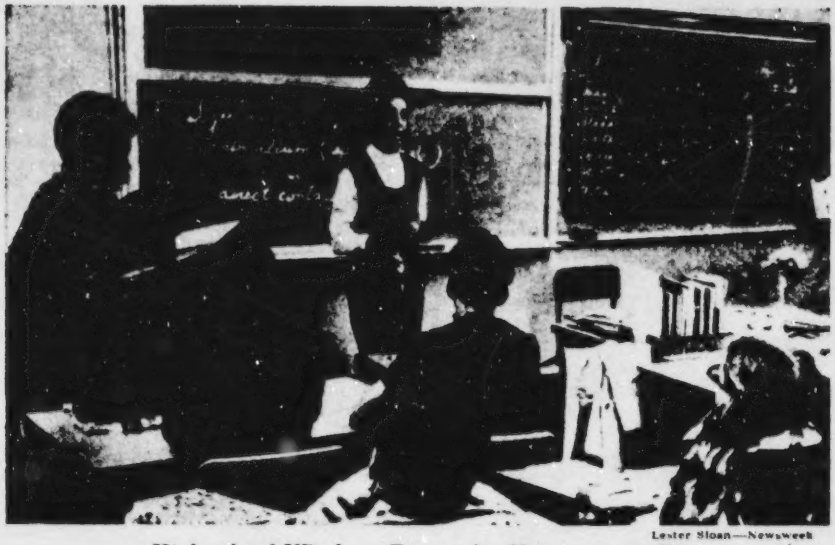


VENEREAL DISEASE RATES: A BREAKDOWN BY STATES

Reported case rates per 100,000 of population.

State	Gonorrhea	Syphilis
ALABAMA	258.3	4.8
ALASKA	913.7	8.5
ARIZONA	255.7	14.0
ARKANSAS	400.3	17.0
CALIFORNIA	500.3	14.1
COLORADO	227.6	2.7
CONNECTICUT	213.8	7.2
DELAWARE	283.9	11.8
FLORIDA	391.1	24.4
GEORGIA	599.7	32.4
HAWAII	200.3	3.2
IDAHO	208.5	0.6
ILLINOIS	440.2	8.8
INDIANA	154.9	6.7
IOWA	199.4	0.5
KANSAS	283.1	3.0
KENTUCKY	183.4	9.4
LOUISIANA	337.0	20.7
MAINE	111.8	1.0
MARYLAND	372.5	12.5
MASSACHUSETTS	151.6	5.5
MICHIGAN	229.3	7.6
MINNESOTA	127.4	1.6
MISSISSIPPI	387.9	100
MISSOURI	324.0	5.7
MONTANA	134.4	0.7
NEBRASKA	267.0	1.6
NEVADA	351.8	31.3
NEW HAMPSHIRE	72.7	0.8
NEW JERSEY	143.5	14.8
NEW MEXICO	273.7	14.1
NEW YORK	277.6	24.3
NORTH CAROLINA	366.6	8.6
NORTH DAKOTA	97.7	1.2
OHIO	270.9	4.1
OKLAHOMA	256.1	4.4
OREGON	359.0	1.2
PENNSYLVANIA	135.6	3.2
RHODE ISLAND	96.7	4.9
SOUTH CAROLINA	513.2	12.2
SOUTH DAKOTA	214.8	2.1
TENNESSEE	468.3	6.5
TEXAS	423.2	26.1
UTAH	94.1	3.9
VERMONT	102.7	0.7
VIRGINIA	245.3	7.5
WASHINGTON	261.4	3.5
WEST VIRGINIA	105.0	2.0
WISCONSIN	181.5	1.5
WYOMING	74.2	1.5

Source: American Social Health Association



Lester Sloan—Newsweek

High-school VD class: Forget the Chautauqua talk

and female. Up to 40 per cent of new cases of syphilis occur among male homosexuals, according to some experts. "It's not unusual," says Nellis, "for some of them to have 50 to 60 contacts a month."

Venereal disease, of course, has plagued man for centuries. The first recorded epidemic of syphilis swept Europe in the late fifteenth century, giving rise to the still-popular notion that Columbus's voyagers had brought the disease back with them from the New World. But in his new book, "Microbes and Morals," bacteriologist Theodor Rosebury argues that many cases of leprosy described in the Bible were, in fact, syphilis. Gonorrhea has also been traced to ancient times. And throughout history, VD germs have been known to move freely among the high-born as well as the poor. Henry VIII, Cellini, Napoleon and Goethe are only a few of the great who paid for their indiscretions with syphilis or gonorrhea.

Two Diseases in One

Venereal disease (a term derived from Venus, the Roman goddess of love) includes several disorders transmitted largely through sexual contact. But syphilis and gonorrhea are the most serious by far. Each has its way of attacking the body, and each presents special problems of cure and control. Syphilis is caused by a corkscrew-shaped germ, or spirochete, called Treponema pallidum (Latin for "pale corkscrew"). It thrives in the moist environment of the mucous membranes lining the genital tract, rectum and mouth, but expires quickly outside its human host. For this reason, the disease is never transmitted by contaminated toilet seats. Inside the body, the syphilis spirochetes multiply rapidly and cause an insidious infection that is really two diseases in one.

The first stage of infection, called "primary" syphilis, occurs from two weeks to three months after exposure, usually in the form of a hard chancre, or open sore, on the penis or in the vagina, cervix or rectum. Lymph nodes in the genital area may also be enlarged. Diagnosis can be made by examination of fluid from the chancre under a special "dark field" microscope that reveals the organisms. About a month after the chancre appears, a blood test for antibody-like substances produced in response to the spirochete can also be used to detect the disease.

If untreated, syphilis proceeds to a "secondary" stage in which the spirochetes spread through the blood stream. The original chancre may disappear, but a rash usually spreads over the entire body. At the same time, further ulcerations may occur in the mucous membranes or skin.

The secondary stage may disappear after a matter of days or months. For years, the disease may remain latent, with no symptoms, and detectable only by a blood test. The syphilis victim may experience no further trouble. But in one in four cases, the disease will emerge again in a particularly vicious fashion. The spirochetes may attack the brain, causing a form of insanity called general paresis; the spinal cord, resulting in a type of paralysis known as locomotor ataxia; the blood vessels, particularly the body's main artery, the aorta, or the optic nerve, causing blindness.

Syphilis can be transmitted only during the primary stage and after an incubation period of some ten to 90 days; the patient with latent syphilis is no longer infectious through sexual contact. But the mother, even in the latent stage, can infect her unborn child, causing death or severe deformities of the bones and teeth. Of particular concern to public-health officials is the sharp increase in congenital syphilis last year—400 cases, compared with 300 in 1970.

Although less lethal than syphilis, gonorrhea is far more prevalent and harder to control. The disease is spread by a gonococcus which also thrives in the moisture of mucous membranes. The first signs of infection usually appear within a few days. In males the bad news usually comes in the form of pain while urinating and a discharge of pus from the penis. Unless treated, the gonococci may spread through the reproductive system, inflaming the prostate gland, seminal vesicles and testicles, possibly causing sterility. Another problem that makes gonorrhea hard to control is the fact that there are a number of genital infections, loosely classified as non-specific urethritis, whose symptoms in the early stages closely resemble those of gonorrhea, but which are not necessarily spread by sexual contact; some can be picked up just the way colds are. In women, gonorrhea may produce no painful symptoms; in fact, some 800,000 female carriers are at large today, unknowingly transmitting the disease to their sexual partners. In active cases, the disease may spread through the reproductive tract causing painful pelvic inflammatory disease. It also scars the Fallopian tubes—a condition that is a major cause of infertility in American women.

Control by Detection

A major problem in the treatment of gonorrhea is that the gonococci—like the staph organisms that plague U.S. hospitals—have become increasingly resistant to penicillin. The standard dose needed to effect a cure has increased during the last 25 years from 150,000 units to 2.4 million units. Contrary to rumor, however, no "killer" strains of gonorrhea are being brought back to the U.S. from Southeast Asia. "They are all treatable," says Col. Jerome H. Greenberg of the Army Surgeon General's office, "though some are more resistant than U.S. strains." And importation of VD from Vietnam is not a major contributor to the current epidemic, Greenberg adds. Only 65 cases are introduced by returning GI's each week, compared with 40,000 arising among U.S. civilians.

The major means of trying to control the VD epidemic is by detecting cases and tracking down contacts. For gonorrhea, the task is far more formidable than it is for syphilis. There is as yet no simple blood test for screening patients with gonorrhea; detection depends on locating the organisms in fluid from the genitals, and in the case of women, this requires time-consuming cultures that are far from 100 per cent reliable. Since the disease has a short incubation period, it can rapidly outdistance investigators tracking it down through case findings.

Because of its relatively long incubation period, syphilis is easier to keep in check. When a syphilis victim names a sexual contact, investigators have some weeks to find him and treat him before he has infected someone else. A classic example of contact tracing was Syphilis Mary, a blond waitress at a Riverside, Calif., truck stop who worked as a prosti-

tute in her off hours. Investigator Nellis of San Francisco learned about her from a Nebraska truck driver who had come down with syphilis. Once he found her, she turned out to be an investigator's dream—she had meticulously jotted down the names and addresses of all her clients, a total of 311 potential carriers. Fanning out over 34 states, investigators located seven persons diagnosed as having syphilis and treated another 88 who were given preventive penicillin shots because the incubation period after contact hadn't expired. Unfortunately, some 86 contacts couldn't be located. Nonetheless, Nellis estimates that at least 1,000 cases of syphilis were prevented by the case-finding effort.

An Infectious Lover

A less demanding, but more typical case, Nellis recalls wryly, involved a 35-year-old businessman with syphilis who admitted that he had been cheating on his wife. He listed four women who might have given him the disease but insisted that his wife couldn't have been the source. As it turned out, the extramarital contacts proved healthy, but the wife had syphilis and, to her husband's chagrin, a lover who had infected her.

Sleuthing out syphilis can be frustrating work. "In the ghetto, they avoid you like the bill collector," says Dick Howard, a Federal VD investigator at the Hollywood-Wilshire Clinic. "In Beverly Hills, the people feel they're too important to deal with you and want to handle it themselves." Private physicians, it is frequently charged, often refuse to let investigators interview their patients. The free clinics frequented by members of the youthful subculture also tend to protect their patients by failing to report new cases or aid in case finding. "But we've never been hard on them about it," says Smartt. "There's an epidemic and we need all the help we can get."

With enough concentrated effort, gonorrhea can sometimes be curbed by screening for new cases and tracking down potential carriers. Since 1968, Chicago health officials have carried out routine cultures of the genital area among persons coming to city clinics and hospitals for various reasons other than VD. In all, 56,587 persons were checked last year and 9 per cent turned out to have gonorrhea. Most important, the effort sharply increased the number of cases found among female carriers who showed no symptoms. Health officials also applied group tracing, in which associates of a gonorrhea victim not initially named as sex contacts are also tracked down and tested. The result for Chicago has been an 11 per cent decrease in the number of gonorrhea cases in the first nine months of last year while the national incidence has risen 9 per cent.

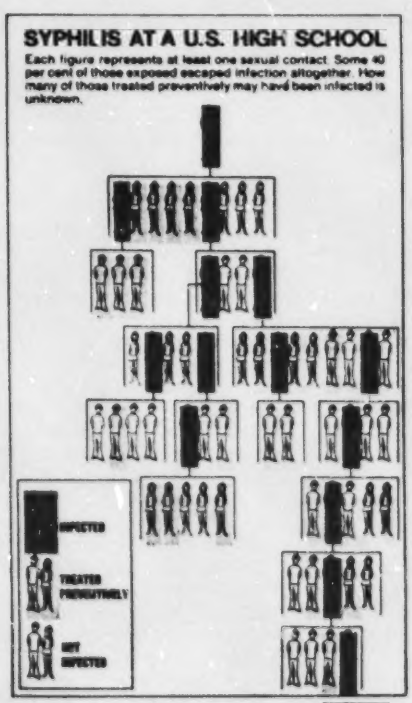
Many experts believe that syphilis, at least, could be brought under control by case finding. The trouble is, the Federal government hasn't been willing to spend the money in the effort. Since 1962, when the U.S. Surgeon General created a major stir about the mounting incidence of syphilis, some $6.3 million has been dispensed annually, largely to pay case finders. But because the constant expenditure hasn't kept pace with inflation, the number of investigators has been trimmed from 800 in 1964 to about 500 today. This, many observers insist, is one reason why syphilis cases rose 8 per cent in 1970 and 16 per cent in 1971, the largest case load in the two decades since penicillin came into general use.

A Lack of Knowledge

Some VD experts place their hopes on a vaccine. "No communicable disease," says Smartt, "has ever been eradicated unless there was a preventive vaccine to do so." So far, however, the picture isn't very bright. Researchers have as yet been unable to grow the syphilis spirochete in cultures. There's no reason, in the mind of some researchers, why this can't be accomplished, given the research support. "You could possibly develop a vaccine in five years," says Dr. John Knox of Houston's Baylor College of Medicine, "but at the rate they're putting money into it now, it could be 105."

The outlook for gonorrhea control through vaccines or other research developments is even gloomier. "Our basic lack of knowledge is incredible," says Dr. Leslie Norins, chief of the Venereal Disease Research Laboratory at the National Communicable Disease Center in Atlanta. "There is a crying need for fundamental research."

Gonorrhea research has been hampered in the past by the fact that there was no experimental animal that could


SYPHILIS AT A U.S. HIGH SCHOOL
Each figure represents at least one sexual contact. Some 40 per cent of those exposed escaped infection altogether. How many of those treated preventively may have been infected is unknown.
INFECTED
TREATED PREVENTIVELY
NOT INFECTED
Eb Ohlssen

Brooks Clift
Norins: Do the research

Alfred Higgins Productions
Smartt: Find the vaccine

Lester Sloan—Newsweek
Sleuth Howard: Trace the contact

Lawrence McIntosh
Arnold: Ring the doorbells

be infected with the disease for laboratory study. But within the last year, VDRL researchers have been able to induce gonorrhea in chimpanzees and study its transmission between males and females. Investigators have also found that women infected with gonorrhea produce antibodies in the genital tract against the gonococcus that may explain why many don't develop symptoms but remain carriers of the disease. Conceivably, these findings could help toward the development of a gonorrhea vaccine. More promising has been recent work at VDRL and New York's Rockefeller University toward devising a simple blood test for gonorrhea.

Because of the stigma of VD, efforts to educate the public about syphilis and gonorrhea have lagged about as badly as research. In several cities, community groups have established telephone hotlines to provide worried callers with advice on the symptoms of VD and where to go for treatment. But most agree that the educational effort should be made in the schools—and with the earliest feasible age group. "We almost have to beat puberty," says the District of Columbia's Pate, "because they are coming into the clinics so young." He cites, in this connection, a 9-year-old girl who contracted VD from a boy friend aged 13.

A Need for Funds

A major problem is that many teachers are uncomfortable with such subject matter. In many school districts, VD is dealt with, if at all, in moralistic tones more suitable to a Chautauqua meeting than to a health class. "When a child learns that diphtheria exists and yellow fever exists," says Smartt, "he ought to learn that gonorrhea exists, too." In California last year, Gov. Ronald Reagan vetoed a bill that would have exempted VD instruction from a state law requiring schools giving sex education courses to notify parents and give them a chance to review the study materials used. The law had, in effect, crippled sex education in the state, and the amendment would have encouraged VD instruction as part of health courses.

Washington, D.C., has instituted one of the more realistic school VD programs, one that even includes instruction in the use of condoms. "Our purpose," says District VD adviser Myron Arnold, "is to teach the student something he'll remember on a Saturday night, not necessarily on an examination."

Obviously, what is needed most of all to bring about the final control of the national VD epidemic is the same kind of doorbell-ringing, mother-marching concern that led to the development of polio vaccines and puts vast sums of money into efforts to conquer cancer and curb heart disease. "If men started getting pregnant or a dozen senators came down with paresis," sums up C.S. Buchanan, director of the Georgia VD-control program, "we would have all the funds we needed."

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HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION
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Vol. 47, No. 4, August 1971

Venereal disease and the great

A. DICKSON WRIGHT

London

Venereal disease has been no respecter of persons and many notable figures have been afflicted in the past. Royal personages and politicians have enjoyed no immunity, and poets, musicians, writers, and artists longing for new experiences to inspire new works have ultimately had to face reality and publicity when complications arose in the form of stricture, tabes, insanity, or blindness with the whole world aware of their misfortunes. Soldiers and sailors with their extensive leisure and changing domiciles have always seemed to stray, but as they are expected to do so they have generally received adequate treatment with a better prospect of avoiding painful late consequences than is the case for civilians. Now things have been greatly changed by the impact of antibiotics, and the venereal history of the new great will become almost a secret in the future because the tell-tale 'lost nose', aneurysm, paralysis, insanity, or blindness will be no more.

Literature and Philosophy

Writers have been greatly afflicted; they seem to yearn for experience to incorporate in new works. Alphonse Daudet could not have lived the youth he did without contracting syphilis. He truly earned it, and says so in a little book published after his death. This book, *La Doulou*, includes a vivid clinical account of tabes dorsalis written with great clarity by a master of prose; unfortunately his family edited it considerably when it was published in 1931 – 37 years after the author's death. He does not speak well of his doctors, Potain, Guyon, and Charcot. The first diagnosed tuberculosis, and the second rheumatism, but Charcot, a great friend who made the correct diagnosis, ordered Seyre's suspension treatment with such disastrous consequences that he and Daudet never spoke to each other again. Morphine alone made life bearable; Daudet enjoyed the *Bercements divins des nuits de Morphine*, and died an addict of morphia, cocaine, ether, and hashish. It must have been a pathetic meal for Mrs. Walter Palmer, the Mayfair hostess, with Alphonse Daudet on one side and Meredith on the other at her magnificent house in Grosvenor Square. To lean in front of her to touch glasses was beyond their ataxic powers, and the wine was spilt over Mrs. Palmer though she was not disturbed by it.

FIG. 1 *Alphonse Daudet (1840–97), who left a vivid account of the sufferings of a tabo-paretic. He was a great friend of George Meredith, who was also paralysed from the same cause (Reproduced from the frontispiece of "Alphonse Daudet" (1949) by G. V. Dobie, published by Nelson, London)*

George Meredith was born in Portsmouth in 1828. His father was a naval tailor, and in the snobbish Victorian age George Meredith disowned him, although his father had clothed Nelson, Rodney,

Marryat, and other famous sailors. Marryat refers to Meredith's father in *Peter Simple*. Meredith wrote of his family in his novel *Evan Harrington*. Meredith's marriage was a tragedy, described in his poem *Modern Love*. He was first a publisher's reader and through serious errors of judgment lost thousands of pounds for his employers Chapman and Hall; *East Lynne* and *The Heavenly Twins* were two of his rejects. After his divorce he lived a Bohemian life with Swinburne, Rossetti, and others. He was then married again, this time happily, to Mary Vulliamy by whom he had two children, and later went to the Austro-Italian war as a correspondent. He may have acquired syphilis during his travels with the Army or during his excesses with Swinburne. In 1874 'gastritis' developed, he turned vegetarian and became a living skeleton; later, when he became ataxic and could no longer enjoy his country walks, locomotor ataxia and gastric crises were at last correctly diagnosed. His eyes were not affected; he went to live in London and even travelled abroad, and he was still able to write. *Diana of the Crossways* was written under the constant threat of gastric crises and lightning pains. Persisting bladder infection resulted in a large stone which was removed by Sir Buckstone Browne. Meredith not only paid the fee, but dedicated *Lord Ormont and his Aminta* to his surgeon. He remained cheerful and happy between bouts of pain and avoided addiction to drugs. While affecting to deride honours he was none the less glad when Edward VII presented him with the Order of Merit. He now lived a cripple's life with his bath-chair pulled by his faithful donkey 'Picnic'. When he died at the age of 81, his body was cremated and the ashes were interred beside his second wife in Dorking Cemetery. It is interesting that his second marriage was close to the time when he most likely contracted syphilis, yet his children were healthy.

Another writer who did not hesitate to inflame the passions of his readers and perhaps lure them into catching the disease from which he suffered was de Maupassant, the great master of the short story. Possibly like Schopenhauer he developed a tendency to misogyny when he discovered he had syphilis; his story of the monk who hated the sexual act and gloatingly pushed a loving couple in a builder's caravan office over a cliff during their love-making leaves one with this impression. He lived a youthful life of unbridled sex and died at the age of 43 from general paralysis of the insane.

Thomas Chatterton (1752–70) ended his short life, it is said, by suicide at the age of 18 after having contracted syphilis at the age of 16. He could not afford Greek water, a favourite remedy of the time; it cost ten shillings and sixpence a bottle, George II having given a monopoly to its discoverer. Instead, he first took quack medicines without effect; he next drank huge quantities of hot well water from Bath and finally he took mercury and had 3 weeks of dreadful stomatitis. He then came to London to write poetry, but the disease returned and so he followed the treatment of Paracelsus, fasting, complete abstinence, and drinking Fowler's water. This latter he took in such quantities as to induce vomiting and diarrhoea for which he sought relief with opium. He died starving and utterly destitute from arsenical poisoning.

François Villon, who was born in 1431, undoubtedly suffered from venereal disease in the form of ulcus molle and condylomata acuminata. He lived before the appearance of epidemic syphilis in Europe but according to Prokisch and Rosenbaum he suffered from 'pre-Columbian syphilis'. He lived for a time on the immoral earnings of a prostitute, Margot, to whom he dedicated a poem. Bad company ruined his weak nature, and he became a thief, a cheat, a vagabond, and a murderer, twice sentenced to death. In 1463 he was banished from Paris and nothing is known of his last days. Villon has been cited in the argument in favour of syphilis existing in Europe before Columbus. His complete loss of hair, alopecia totalis, was asserted to be syphilitic alopecia and he refers in the *Ballade de Villon à s'amye* to a *Mademoiselle au Nez tortu* and she has been supposed to have had a syphilitic nose. The alopecia which came to be called the 'French Crown' was, with the saddle-nose, the commonest manifestation of syphilis.

William Thackeray, in his early years, had studied art in Paris, where he contracted gonorrhoea; later for 9 years he suffered the inevitable stricture which was dilated by Buckstone Browne an assistant to Thackeray's great friend Sir Henry Thompson. Buckstone Browne always passed his bougies with the patient standing and he derived tremendous wealth from his management of strictures.

Keats, also a doctor with a licence from the Society of Apothecaries, contrived in his short life to contract syphilis, and it is possible that if tuberculosis had not carried him off at the early age of 24, syphilis would later have marred his life. He took mercury on only two occasions and there are some who argue that this was for his general health and that he never had contracted syphilis.

Molière, at whose death all the doctors cried in unison *Vivat, Vivat, Molière est mort*, was for the last 8 years of his life a chronic invalid. One diagnosis was aneurysm of the aorta. At the fourth performance of his play *Le Malade Imaginaire*, Molière had a convulsion and agonizing pain in his chest and it was thought that his aneurysm had started to leak; he was

taken home from the theatre to die that night from a huge haemorrhage, the aneurysm having burst into his bronchus. This chain of events is in better accord with the diagnosis of aneurysm than with that of a terminal haemoptysis from pulmonary tuberculosis. His 8 years of ill health made him consult many doctors and many quacks, on most of whom he poured hatred and ridicule, but he was instrumental with Boileau in winning Louis XIV's support for Harvey, from which emerged *L'Académie du Roi*, the School of Medicine which based all its teachings on Harvey and led the French profession back to reason and a century's domination of the medical world.

James Boswell, when he came to London in 1762, plunged into the debauchery of the capital with readiness, and his London journal describes in detail his various affairs with actresses and prostitutes in the Haymarket, St. James's Park, and particularly on Westminster Bridge. He despised himself for making amorous schemes whilst in church, and said that after 'the brutish appetite was sated I could not but despise myself for being so closely united with such a low wretch'. For his six attacks of gonorrhoea he was usually treated by his fellow countryman Douglas who is remembered for two anatomical eponyms; on one occasion he sent Douglas's bill to the damsel who had infected him. He doubtless also went to quacks, because he writes in his journal, when describing this affair, 'When I got home, though, then came sorrow. Too too plain was Signor Gonorrhoea. In this woeful manner did I melancholy urinate. I thought of applying to a Quack who would cure me swiftly and cheaply. But then the horrors of being imperfectly cured and having the distemper thrown into my blood terrified me exceedingly. I therefore pursued my resolution to go to my friend Douglas'.

Heinrich Heine (1799–1856), who composed some of the most beautiful poems in the German language, was of Jewish stock but became a Protestant to obtain his doctorate at Göttingen. He hated Germany and settled in Paris where he was welcomed by musicians and writers including Chopin and Victor Hugo. From 1834 he lived with Mathilde, a shop girl from a boot shop whom he eventually married; she nursed him devotedly when he was laid low by syphilis. His first symptom, as was the case with Maupassant, Villon, Nietzsche, and Schopenhauer, was unbearable headache starting when he was 24. In 1840 facial pareses and diplopias commenced and in 1844 he developed ophthalmoplegia. Then his oral muscles weakened and he could no longer osculate; ageusia, anosmia, dysphagia, and paralysis of the masticatory muscles then appeared. Then followed epileptic fits, lightning pains, and finally weakness of his legs, and he collapsed in the Louvre in May, 1848, quite appropriately in front of the statue the Venus de Milo. Here he offered himself up as a cripple on the altar of love and retired to his 'mattress grave' to be waited upon faithfully in his helpless, paralysed, and incontinent state by the faithful Mathilde (Eugenie Murat). His end came on February 17, 1856, when he was 56 years old. His mentality was clear to the end and from wide reading of medical texts he acquired a comprehensive knowledge of his illness. He had a very eccentric and successful Hungarian doctor, David Gruby, whose main practice lay among women for whom he decorated his consulting room with skeletons and stuffed animals. He preferred anonymity when he drove to his patients in a carriage which was completely enclosed but for a hole in the roof. His prescriptions were of great length and absurdity running into many sheets of paper; the ingredients were bizarre and numerous but, significantly, were always dissolved in alcohol.

FIG. 2 *Heinrich Heine lying on his 'mattress grave' paralysed by locomotor ataxia. He lay thus for 8 years (Courtesy of the Wellcome Trustees)*

Oscar Wilde undoubtedly suffered from syphilis contracted from a lady known as 'Old Jess' the only working harlot in Oxford when he was an undergraduate. He later dedicated a poem to her in which

he refers to the disastrous consequences of their association. He received huge mercurial inunctions which left his teeth severely damaged. He had a medical examination before he married Constance Lloyd, and she gave birth to two healthy sons, but after the birth of the second his syphilis manifested itself again. He died in the Rue des Beaux Arts in Paris, probably of a cerebellar abscess due to otitis media consequent, he said, to falling upon his ear while in the Chapel of Reading Gaol. His grave in the Père La Chaise cemetery in Paris is now a place of pilgrimage for homosexuals.

FIG. 3 *Oscar Wilde, who contracted syphilis while an undergraduate at Oxford, died from an unassociated brain abscess in* 1897
(Courtesy of the Wellcome Trustees)

Baudelaire was also undoubtedly a syphilitic and a letter of his to Madame Aupick still exists in which he wrote, 'Étant très jeune, j'ai eu une affection vériolique'. He was a dissolute man and an opium addict, with which drug he attempted to kill himself on occasions. Many of his masterpieces were written during his period of addiction.

Dean Swift is thought by some to have suffered from cerebral syphilis. His behaviour became progressively more eccentric in his latter days and his poem on Celia is clearly the work of a madman.

Andreas Ady, a great German poet and writer, died of general paralysis of the insane in 1919.

Mirabeau, one of the literary forerunners of the French Revolution, died in 1791 of syphilis.

Goethe's only live-born son was regarded as having died of general paralysis of congenital origin; the other pregnancies culminated in still-births.

Shakespeare's godson and probable natural son, the Poet Laureate, William Davenant (born in 1606, ten years before Shakespeare's death), who figures in Aubrey's *Brief Lives*, suffered from both gonorrhoea and syphilis, and as a result of the latter he lost the bridge of his nose. It was said of him that:

'He got a terrible clap of a handsome
Black wench that lay in Axe – Yard Westminster
Whom he thought on when he speaks of Dalga
In Gondibert which cost him his nose
With which unlucky mischance many witts
Were too cruelly bold, *e.g.* Sir John Mennis,
Sir John Denham, and Sir John Suckling'.

Sir John Mennis (1599–1671) was the sailor poet who fought at sea and on land for Charles I and Charles II. Sir John Denham was another gambling drunken poet. Sir John Suckling (1609–1642), yet another dissipated royalist poet, committed suicide at the age of 33; he invented cribbage and is supposed to have made a fortune from selling marked cards, and mocked Davenant's amorous mishaps in the following lines:

'Will Davenant ashamed of a foolish mischance
That he hath got lately travelled in France
Modestly hoped the handsomeness of his Muse
Might any deformity about him Excuse'.

'Surely the company would have been content
If they could have found any precedent
But in all their records either in verse or prose
There was not one laureate without a nose'.

Of Thomas Carewe, a contemporary minor poet, Suckling wrote:

'If it be so his valour must I praise
That being the weaker yet can force his ways
And wish that to his valour he had strength
That he might drive the fire quite out at length
For troth as yet the fire gets the day,
For evermore the water runs away'.

A fair description of Carewe's *chaude pisse*.

Shakespeare himself is not above suspicion; he speaks so often of venereal disease with feeling and knowledge that it has been postulated he was a sufferer himself; thus in Timon of Athens:

'Consumptions sow
In hollow bones of man: strike them sharp
And mar men's spurring. Crack the lawyer's voice
That he may never more false title plead

Nor sound his quillets shrilly; hoar the flamen
That scolds against the quality of flesh
And not believes himself: down with the nose
Down with it flat: take the bridge quite away
Of him that, his particular to foresee,
Smells from the general weal: make curled pate ruffians bald,
And let the unscarred braggarts of the war
Derive some pain from you: plague all;
That your activity may defeat and quell
The source of all erection. There's more gold:
Do you damn others, and let this damn you
And ditches grave you all'.

William Hickey (born 1749), the 'Indian Pepys', was a patient of John Hunter and of his surgical predecessor Robin Adair. He suffered severely from syphilis when he was 30 but largely ignoring it he continued drinking and committing every degree of folly and excess. Early in 1777 he had a thorough course of salivation for a severely ulcerated throat, which developed in spite of taking Velno's syrup, and in the face of a favourable opinion of his case given him previously by Mr. Howard of the Middlesex Hospital. For this course of treatment he quit the house of his friend Mr. Cane, and went into lodgings. 'The horrible ceremony of rubbings' commenced on February 1st, and by the sixth his saliva was pouring four pints a day, and his mouth terribly sore. Adair was very attentive, came frequently, and gave him permission to leave for India on March 10th, provided he continued with hot baths and plenty of sarsparilla.

Amongst great foreign authors who suffered from syphilis were Dostoievski, Strindberg, and Walt Whitman. The last-named American poet wrote some remarkable erotic poetry during his life time, rivalling even that of Robert Burns.

Philosophers, some of whom regard themselves as superior individuals on a different plane from other men and therefore less liable to female entanglements, nevertheless make their contribution to famous syphilitics; the two best known are Nietszche and Schopenhauer, both of whom suffered from cerebral syphilis. Anatole France was a great admirer of Nietszche and said that *la paralyse général fait seule les grands hommes*; he looked upon syphilitic insanity as providing the drive and restless energy so necessary for the advancement of the human race. Lange thought similarly and in peculiar words said that Nietszche was 'A wonder of spirit and destiny'. Nietszche's medical history was a long one; in 1865 he contracted syphilis in a brothel which he considered the only place for love. During the secondary stage in the same year he had syphilitic meningitis, and 8 years later in 1873 he had basal meningitis. After a further 8 years came typical general paralysis of the insane which pursued a most unusual course and remitted after 4 years. A year later came iritis and 4 years later the general paralysis returned and progressed for 2 years; it then developed a permanent state until his death 10 years later in 1890. While a syphilitic he produced much of the writing which had so strong an appeal to Kaiser Wilhelm and Hitler, providing the 'philosophical' inspiration to the makers of the two World Wars. Arthur Schopenhauer was not of a war-making philosophy, in fact he held that syphilis and war were the two greatest enemies of mankind. He contracted syphilis while a student at Göttingen and underwent exhausting and uncomfortable mercurializations for long periods. As a result of his discomfort he became an inveterate misogynist and syphilophobe. His misogyny carried him as far as violence at times, and he once threw a harmless woman downstairs with her sewing machine after her. As a result of a law suit for this he had to pay her £9 a year for life; when she died and relieved him of this obligation, his comment was *Obit anus, abit onus*. He regarded women as no better than

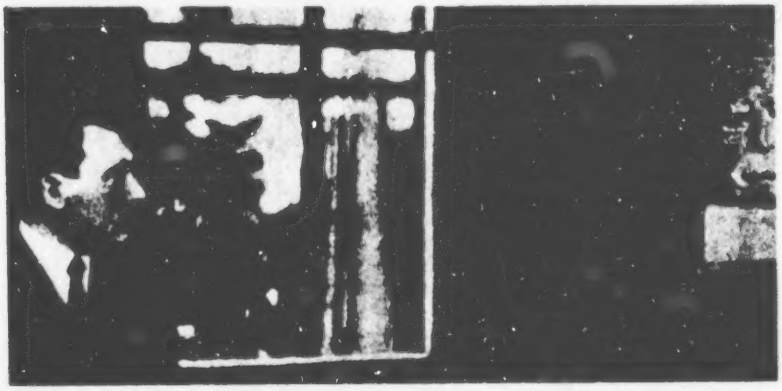

FIG. 4 *Adolph Hitler gazes reverently at the bust of his syphilitic inspirer – Nietszche*

purveyors of syphilis. He did not die of syphilis as did Nietszche but of pneumonia at the age of 72, but syphilophobia and pessimism dominated his life. The suicide of his father in Hamburg when he was at school in Wimbledon, and his quarrels with and separation from his mother followed by his syphilis made him into a strange miserable man, well fitted to his melancholy philosophy. He loved to point out as proof of the logic of his misogyny that Descartes, Leibnitz, Malebranch, Spinosa, and Kant all preserved their philosophic personalities from the 'tyrannies of women' and perhaps from sex and remained unmarried. Schopenhauer died in 1860.

Ulrich von Hutten, a great humanist and reformer, contracted syphilis in 1511 fairly soon after its arrival in Europe, and when he was aged 23 began 9 years of suffering for his youthful immoral life; he died when he was 34. The malady showed itself in the form of very painful ulcers, knot-like lesions (gummata) on his legs and arms, stiff joints, rending night pains, and filthy running sores, which had worn him away to skin and bones. He had been, 'As well cut as burnt with scissors, knife and fire both actual and potential to no purpose; salivated six times as ineffectually; all was cured by a strict diet for thirty days and upwards with a sudorific decoction of Guaiacum'. Hutten wrote of his 'cure' in *De medicina Guaiace vel de morbo gallico*. It is strange that both Ulrich von Hutten and Benvenuto Cellini should have had such faith in this useless remedy.

Casanova, the epitome of the lover, excelled in the technique of preliminary seduction, but in the subsequent consummation all was not joy. Many of his 'conquests' were ladies of the street for which he paid with four attacks of gonorrhoea, five of chancroid, one of syphilis, and one of herpes preputialis. He probably spent 5 years of his life between the ages of 19 and 41 submitting to cures of these conditions.

The armed forces

It is often said that soldiers and sailors worship Venus as ardently as Bellona, and of soldiers the one most remembered is Napoleon who contracted gonorrhoea when a young army lieutenant in Paris. It was said that the affair took place against a convenient wall near the Tuileries. Cure took some time and he suffered a good deal from stricture; he was often to be seen in a characteristic posture with his head resting on his raised right forearm as he endeavoured to urinate against a tree. At his *post mortem* examination stones were found in his bladder. His scabies contracted in Toulon may well have been sexually acquired; it tormented him for many years until he was cured by Corvisart. It is also said that he acquired

FIG. 5 *Benvenuto Cellini (1500–70), the celebrated Italian goldsmith and jeweller, extolled guaicum as the drug which cured his syphilis (Courtesy of the Wellcome Trustees)*

syphilis during the 'Hundred Days' after his escape from Elba.

Frederick the Great, a homosexual, wrote to Voltaire in a letter, part prose part verse, in 1760 at the age of 49 as follows:

J'eus l'honneur
De recevoir pour mon malheur
D'une certaine imperatrice
Une bouillante chaude p . . .

It is recorded that he developed such a severe orchitis that he was castrated, but authorities differ as to whether this was unilateral or bilateral. As he grew older he became progressively more peculiar, living alone or with men such as Voltaire and with his dogs at Sans Souci Palace in Potsdam; he painted his face and never washed or bathed.

Lord Cardigan, while leading the charge of the Light Brigade at Balaclava, is reported to have had severe gonorrhoeal orchitis; he rode with a little less

dash as a result of it and to this he may have owed his life!

The Church

Members of the church have not been immune from venereal disease. Cardinal Wolsey contracted syphilis and it was probably conducive to his death. The prepared indictment, to which he never answered because of his premature death, stated that he 'Knowing himself to have the foul and contagious disease of the great pox, broken out upon him in divers places of his body, came daily to your Grace rowning in your ear and blowing upon Your Most Noble Grace with his perilous and most infectious breath to the marvellous danger of Your Highness'. So one of the many charges was that of infecting the King with syphilis.

There were three syphilitic Popes: Alexander VI, Julius II, and Leo X. They died in the early days from 1503 to 1521 before the papacy became alive to the dangers brought to Europe by Columbus. Cardinal Richelieu had a large perianal abscess, probably of venereal origin, and developed retention of urine on his journey to Bordeaux. He was catheterized several times in the standing position; the first time the catheter was passed, four pints of urine were obtained, giving his eminence *une joie inconceivable*. Dr. Donne, the famous Archdeacon of St. Pauls and favourite of our homosexual King James I, left an ode of reproach and sorrow to the maid who gave him the Pox. He pointed out the logic of the disease, starting in one pointed member, and finishing with destruction of another – the nose.

Art

Painters were notoriously prone to relieve the tedium of their apprentice years with what they termed the Bohemian life and a number acquired venereal infections which shortened their lives or fostered suicide and drug addiction. Manet, van Gogh, and Gauguin were all syphilitics; van Gogh cut off his ear and sent it to the object of his affections, and Gauguin thought the sunny climate of Tahiti would cure him, but the main consequence was that he shared his complaint with the natives.

Goya's illness was due to cerebral syphilis. When he was 45 he suffered for a year with blinding headaches, vertigo, a right-sided hemiplegia, aphasia, loss of vision, tinnitus, and deafness. He was left with total deafness, headaches, tinnitus, and further cerebral illnesses but survived until he died of a stroke at the age of 82. No general paralysis developed, all his signs and symptoms being due to a luetic meningitis. Of his twenty children all but one died soon after birth A remarkable portrait of him and his doctor Anieta survives; Goya is obviously very ill and the doctor is pictured giving him a draught of medicine.

Music

Musicians do not make a great historical contribution in this respect, although Beethoven is stated to have been syphilitic with his deafness due to the same cause. Gluck was possibly a sufferer from general paralysis of the insane. Schumann's illness and madness was said to be of syphilitic origin. His was a pathetic story; as he felt and saw the black bats fluttering round his head, he threw himself into the Rhine at Dusseldörf in his dressing gown, having previously paid the bridge toll with his silk scarf. He fell just beside a fishing boat and was rescued to die paralysed and insane in an asylum near by.

Schubert, at the age of 24, contracted syphilis for which he received mercurial treatment; if tuberculosis and poverty had not carried him off while he was young he was unlikely to have avoided late manifestations.

Lorenzo Daponte, librettist of *Don Giovanni, The Magic Flute,* and *The Marriage of Figaro,* had severe syphilis with widespread rashes and pharyngitis for which he was given much mercury; he later died of general paralysis of the insane.

Donizetti, who lived for only 50 years, spent the last 7 years of his life declining slowly with general paralysis of the insane. It was noted first by friends that he had lost his ability to compose yet continued to conduct, but he deteriorated and finally became partially insane. His first epileptic fit he described in language of terror saying that it had struck him like a thunderbolt in his brain. He became more and more insane and efforts were made to get him away from Paris back to his birthplace Bergamo near Milan so that his sexual activity would be stopped by the absence of the music-loving ladies who surrounded him. He sank lower and lower and finally his paralysis permitted him only to totter between two helpers. He sat all day long with his sunken head bent over to the left of his chest. His eyes were seldom opened, but he was dressed in court dress and wearing all his medals, with his helpless hands dangling in white gloves, while his urine dripped uncontrolled into his clothes. Then for his last few months of life he returned to Bergamo. Lying like this he never lifted an eyelid as Giovanni Battista Rubini and Giovannina Bøsoni bawled the duet from *Lucia di Lammermoor* into his ears. He died with the usual fever and convulsions at the age of 50, a typical case of G.P.I.

Monarchy

I will now consider the question of royalty and venereal disease: Ivan the Terrible was born in 1530

and succeeded to the throne 3 years later. He was educated in the worst possible way by his courtiers, though his mother, Helena Glinska, tried to protect him. He married a good woman, Anastasia, but when she died he contracted syphilis. His whole aspect changed and he became wanton in his cruelty; he had seven 'wives' and became a sexual maniac. He massacred the 15,000 inhabitants of Nijni Novgorod in 5 weeks in every possible brutal way, and murdered his heir most brutally; the picture in the art gallery at Moscow of the lunatic king holding the bloodstained head of his dead son in his hands conveys a horror that one remembers for a lifetime. He once proposed marriage with Elizabeth I of England, but she refused him and proposed an aristocratic English lady to him whom he refused in turn. Elizabeth also gave him permission to come to England if driven from his country by rebellion, on one condition, that he paid for his stay here.

Louis XIV reputedly suffered from gonorrhoea. There was no history of syphilis; his fourteen acknowledged children are indirect evidence of this.

FIG. 6 *Charles V (1500–58), the holy Roman emperor, was infected with syphilis*
(Courtesy of the Wellcome Trustees)

He had four official mistresses but he would copulate with any handy lady-in-waiting if in the mood and one of his regular mistresses was not at her post of duty. In his latter years he became a model of puritanical behaviour as a result of his association with Madame de Maintenon, his secret morganatic wife.

Henry III of France was undoubtedly syphilitic and described how he cured himself on the advice of Dr. Peña, a Spaniard, who learnt the treatment from a Turk. The cure consisted of a decoction of Barden root, a method which never achieved acceptance. Henry IV, his son, behaved with great recklessness as regards women and is reputed to have suffered from gonorrhoea on several occasions. An account survives of his treatment with a catheter made of tin and passed in a standing position.

Both the Emperor Charles V and Francis I, whose intrigues with and against Henry VIII of England make a most bewildering story, were said to be syphilitic. Henry VIII is generally regarded as being syphilitic because he had deep ulceration of both legs above the knees. The ulcers seemed to be sinuses of

FIG. 7 *François I (1494–1567), king of France, with whom Henry VIII wrestled physically as well as politically on the 'Field of the Cloth of Gold', was said to be syphilitic*
(Courtesy of the Wellcome Trustees)

some depth reaching down to the femur, and he tried hundreds of remedies on them without effect. The prescriptions still survive and one is designed 'to cool the member', suggesting the origin of his disease. It is probable that the disease spread to his brain because in his latter years his murderous brutality was of an insane degree, most of it based upon distorted interpretation of religion. When his leg sinuses closed and he was tortured with pain he would sentence hundreds to death; it was said that his leg ulcer was responsible for more deaths than the ingrowing toe-nail of Richard the Bold of Burgundy. It has been estimated that Henry in his lifetime executed 3 per cent. of our population.

Paul I of Russia was the natural son of Catherine II of Russia. His putative father Peter III was assassinated by strangulation in 1764 six hours after being forced to sign a shameful abdication and his body was brought to St. Petersburg for a lying-in-state, where his death was announced as due to a 'haemorrhoidal' colic. Paul I (to be) developed a syphilitic nose at about the age of 10 and it became quite typical as he grew older. His mother became Empress after her husband's murder and ruled for 30 years. She succumbed to an apoplexy while on a commode made from the captured Polish throne. Two of her peculiarities were an inordinate consumption of coffee, and a severe syphilophobia which oppressed her greatly, witness the hereditary syphilis of her son. At St. Petersburg she started the first hospital in the world for venereal disease, which had fifty beds. In pursuance of her syphilophobia the lovers selected by her from the Army or in the course of social contacts, had first to be passed by a committee of six women known as *les Épreuveuses*, one of whom was a lady of good English family. After 3 months' observation the lovers would be accepted only if approved by the committee on grounds of technique and if judged free from infection after examination by her Scottish doctor, Fergusson.

FIG. 8 *Henry VIII (1491–1547), who intrigued and quarrelled during his reign with the king of France and the emperor of Germany. All three were syphilitics*

Edward VII described by Rudyard Kipling as 'an obese voluptuary' was notoriously promiscuous. The three best-known mistresses were the Countess of Warwick, Lily Langtry a married woman with a complaisant husband, and Mrs. Keppel who held his hand when he died. He consorted with many women after his experience with Daisy Barton who was pushed into his bedroom by Army officers on the Curragh. From one of his many paramours he contracted gonorrhoea in Karlsbad which he passed on to Queen Alexandra, and it has been suggested that the 'Alexandrine limp' was caused by a painful heel spur of Reiter's disease. They were both treated by George Hastings who received a knighthood in the last year of King Edward's life.

Medicine

A number of famous doctors have contracted venereal disease particularly during the period when there was no protection for the hands during *post mortem* examinations and surgery. Emil von Behring, Koch's famous assistant, died of general paralysis in 1917 at the age of 63: Finsen died of tabes in 1904, and Karl Westphal died in 1923 of cerebral syphilis. He, with Edinger, had discovered the mid-brain nucleus concerned with eye movements, and sadly enough diplopia was one of the symptoms which heralded his cerebral syphilis. The most famous doctor to have had both gonorrhoea and syphilis was John Hunter who inoculated himself urethrally and in the scarified skin of the glans with pus from a case of double infection with urethral discharge and syphilis. In time he developed both infections and by this misinterpreted and courageous experiment he perpetuated the belief that both diseases were the same until Ricord the great French syphilologist proved him wrong a century and a half later.

Conclusion

So ends a chronicle which has extended over many centuries but has barely touched on the pain and misery, individual, familial, and social, caused by the accidents of sexual promiscuity. For who, however promiscuous, would willingly contract venereal disease? Yet it is almost by accident that in this country any great men of our present era who have run the risk of infection are unlikely ever to figure in some future history of syphilis. The widespread use for minor infections of antibiotics with treponemicidal effect has, in the past 25 years, almost certainly cured hundreds of cases of unsuspected latent syphilis, so that victims of newly developing tabes, G.P.I., and cardiovascular syphilis are rare enough to pose a major problem in providing material for teaching. Let it indeed be hoped that soon this chronicle can be judged retrospectively as an obituary of late symptomatic syphilis in the great.

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Summary of Research and Evaluation of Studies

I. THE DISEASE PROBLEM TODAY

A. Gonorrhea

1. Gonorrhea ranks first among reportable communicable diseases in the United States.
   a. Reported gonorrhea rose from 945,945 cases in FY 1975 to 1,011,014 in 1976, an increase of 6.9 percent (men: up 7.2%; women: up 6.4%).
   b. It is estimated that at least 2,700,000 cases of gonorrhea occurred in FY 1976.
2. Results from gonorrhea complication studies show that:
   a. Pelvic Inflammatory Disease (PID) occurs in 17 percent of all women known to have gonorrhea. Projected nationally, this translates into 229,000 cases of gonococcal PID per year.
   b. Results of studies from Scandinavia indicate that damage to the fallopian tubes from a single episode of adequately treated PID results in sterility in from 15-40 percent of cases. This means that in the United States 34,000 to 92,000 women annually are involuntarily sterilized due to tubal damage from PID as a result of gonorrhea.
   c. Gonococcal PID is an important cause of ectopic pregnancies. Ectopic pregnancy as a cause of death from pregnancy and childbirth accounts for over 12 percent of deaths occurring in pregnant women.*
   d. Gonococcal PID accounts for approximately 175,000 hospital admissions totaling 1,200,000 hospital days annually. It is estimated that over 102,500 surgical procedures are performed annually for complications of past or present gonococcal infections.
   e. Some 918,000 school days are lost each year by young women in the United States because of gonorrhea and its complications. Some 5,750 girls will be absent from school each day because of gonorrhea.

B. Syphilis

Syphilis ranks third (exceeded only by chickenpox and gonorrhea) among reportable communicable diseases in the United States: 76,736 cases of syphilis in all states were reported in FY 1976.

a. Reported early infectious syphilis (primary and secondary stages) decreased from 25,746 cases in FY 1975 to 24,933 cases in FY 1976, a decrease of 3.2 percent (men: down 1.6%; women: down 7.2%).

*National Center for Health Statistics: Final Mortality Statistics, 1975. Monthly Vital Statistics Report Vol. 25, No. 11, February 11, 1977, Page 22.

b. An estimated 79,000 new cases of infectious syphilis actually occurred in FY 1976, and about 360,000 untreated cases (including all stages of the disease) exist at the present time.

c. Congenital syphilis cases reported in infants of less than 1 year of age numbered 221 in FY 1975 and 170 in FY 1976, a decrease of 23.1 percent. This is the fourth straight year of decline of such cases.

C. Partial Economic Costs of Venereal Disease: United States, FY 1976

1. Gonorrhea
   Cost of PID: $212,000,000 (annually)
2. Syphilis
   Hospital maintenance of patients with syphilitic psychoses: $60,714,000 (annually)

II. PROGRESS IN VENEREAL DISEASE CONTROL

A. Deaths caused by syphilis: 14,064 in 1940; 200 in 1976 — decrease, 98 percent.

B. Infant deaths due to syphilis: 1,251 in 1940; 4 in 1976* — decrease, 99.7 percent

C. First admissions for syphilitic psychoses: 7,694 in FY 1940; 154 in FY 1968* — decrease, 98 percent.

D. Late and late latent syphilis: 251,958 in FY 1943; 24,594 in FY 1976 — decrease, 90.2 percent.

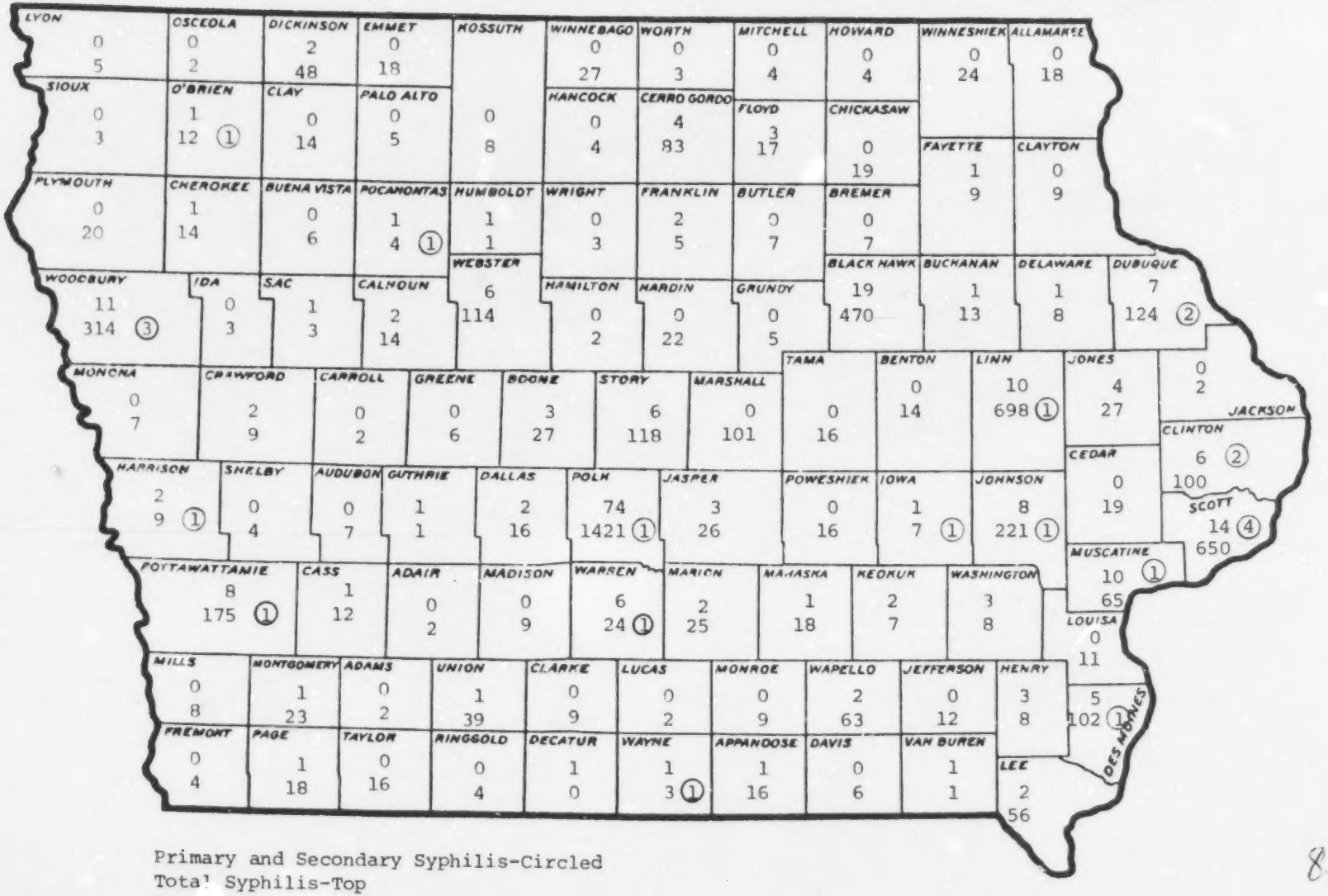
E. Congenital syphilis: 17,600 in FY 1941; 764 in FY 1976 — decrease 95.7 percent.

F. Federally assisted State and local gonorrhea testing programs were launched in July 1972. In the 12-month period ending June 30, 1976, some 9,109,264 women were tested for gonorrhea and 393,657 (4.3%) were found to be infected. The majority of women with a positive test for gonorrhea were asymptomatic, i.e., not aware of their disease.

*Most recent available data.

REPORTED CASES OF VENEREAL DISEASE IN IOWA
FOR CALENDAR YEAR 1977

Gonorrhea - 5791
Total Syphilis - 254
Primary and Secondary Syphilis - 37



Primary and Secondary Syphilis-Circled
Total Syphilis-Top
Gonorrhea-Bottom

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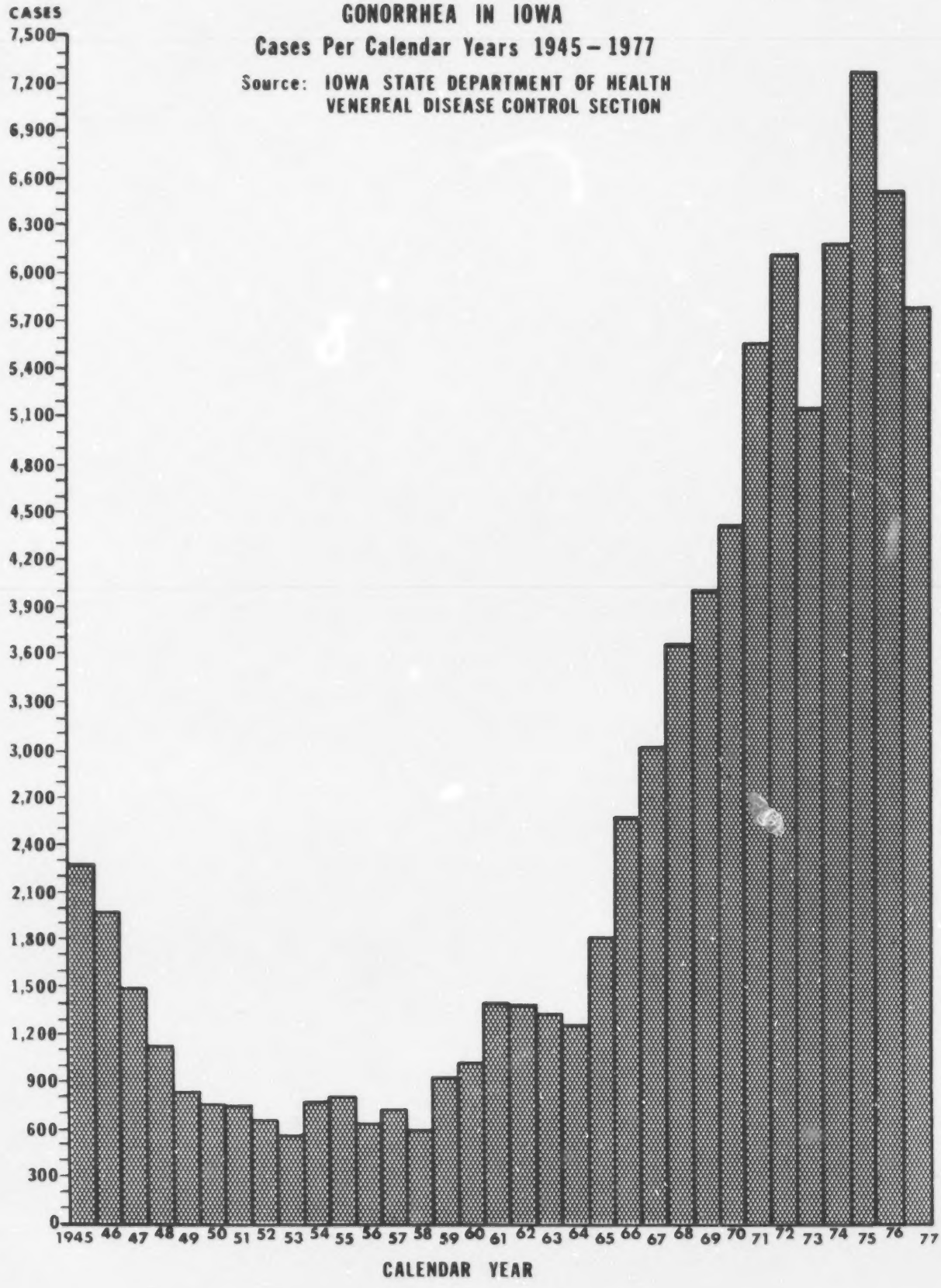

CASES
GONORRHEA IN IOWA
Cases Per Calendar Years 1945 – 1977
Source: IOWA STATE DEPARTMENT OF HEALTH
VENEREAL DISEASE CONTROL SECTION
7,500
7,200
6,900
6,600
6,300
6,000
5,700
5,400
5,100
4,800
4,500
4,200
3,900
3,600
3,300
3,000
2,700
2,400
2,100
1,800
1,500
1,200
900
600
300
0
1945 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77
CALENDAR YEAR

VENEREAL DISEASE IN IOWA
CASES BY CALENDAR YEARS 1957-PRESENT

YEAR	PRIMARY AND SECONDARY SYPHILIS	EARLY LATENT SYPHILIS	TOTAL SYPHILIS	GONORRHEA
1957	12	46	1,236	596
1958	16	18	1,299	921
1959	17	9	1,138	1,014
1960	21	29	1,106	1,401
1961	18	12	1,049	1,393
1962	46	11	904	1,347
1963	29	20	805	1,267
1964	37	18	969	1,805
1965	49	11	762	2,594
1966	74	24	1,043	3,031
1967	45	10	892	3,460
1968	48	12	725	4,002
1969	44	4	738	4,409
1970	15	10	540	5,556
1971	23	13	601	6,115
1972	52	33	482	6,186
1973	56	41	417	5,144*
1974	38	30	377	6,174
1975	32	43	331	7,261
1976	45	62	359	6,515
1977	37	29	254	5,791

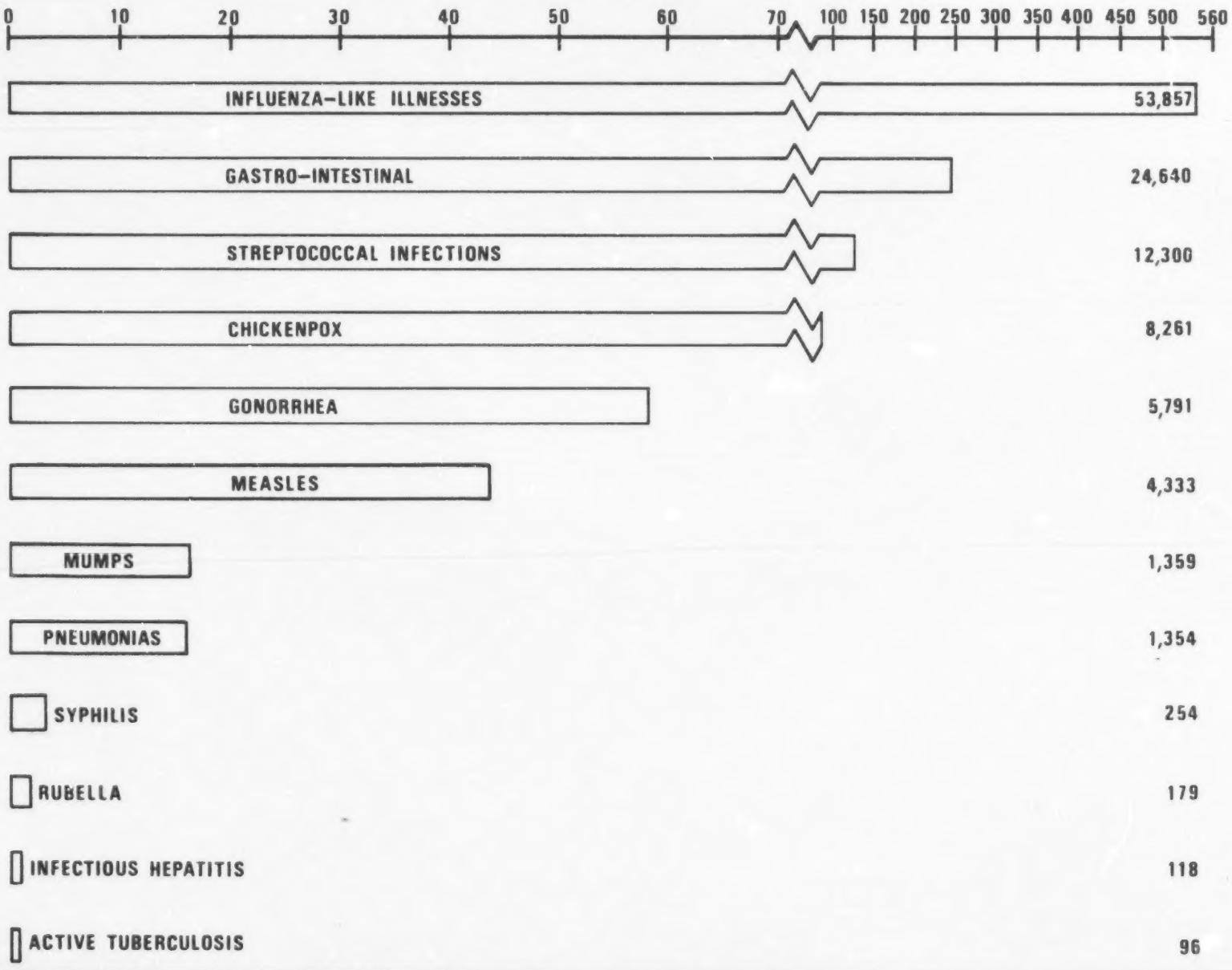
*Beginning in April of 1973, the gonorrhea statistics do not include cases preventively treated; that is, those persons who were treated but were not laboratory positive are no longer counted as cases.

GONORRHEA IN IOWA
PERCENT OF TOTAL CASES BY AGE RANGE
FISCAL YEAR 1960 - 1977

Fiscal Year	Age Range				Total Percent Under Age 30
	Under 15	15-19	20-24	25-29	
1960	1.53	22.69	36.75	20.62	81.59
1961	1.23	22.15	33.20	20.64	77.22
1962	2.56	24.30	32.88	15.20	74.94
1963	2.00	21.06	37.20	16.37	76.63
1964	.95	22.99	36.50	19.39	79.83
1965	.81	22.28	38.12	18.38	79.59
1966	.93	24.97	37.80	17.71	81.41
1967	.85	27.65	39.53	16.47	84.50
1968	.94	29.93	39.64	15.34	85.85
1969	1.05	30.01	39.30	16.19	86.55
1970	1.03	28.78	42.62	14.65	87.08
1971	1.36	32.29	41.29	13.60	88.54
1972	1.20	31.64	39.76	13.67	86.27
1973	1.21	30.75	40.88	15.72	88.56
1974	1.14	28.18	43.36	16.44	89.12
1975	.82	28.74	42.28	17.60	89.45
1976	.65	28.11	41.81	17.51	88.08
1977	.73	28.09	41.02	18.11	87.95

Iowa State Department of Health
Disease Prevention Division
Venereal Disease Section
Lucas State Office Building
Des Moines, Iowa 50319

REPORTED NOTIFIABLE COMMUNICABLE DISEASES IN IOWA – 1977
STATED IN HUNDREDS OF CASES



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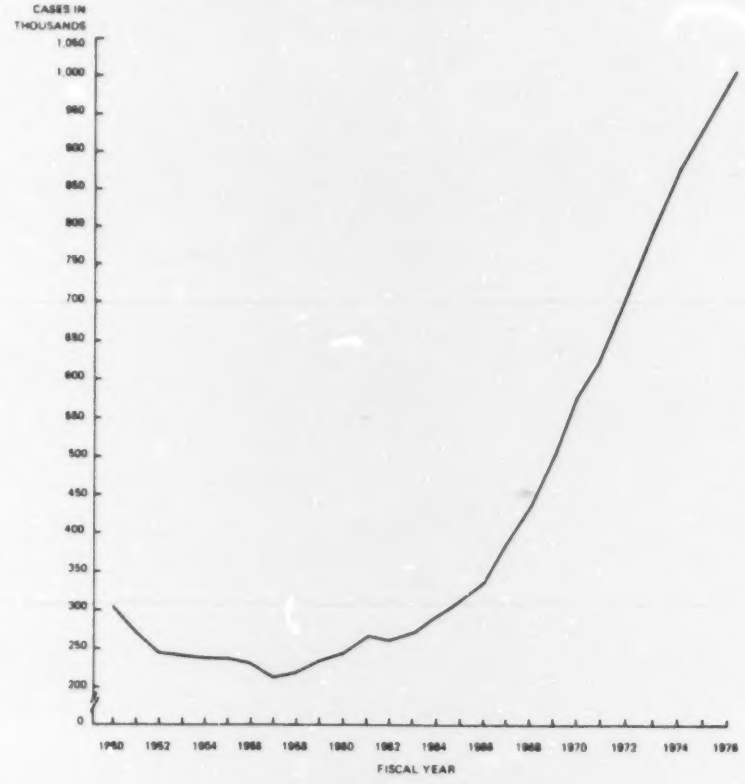
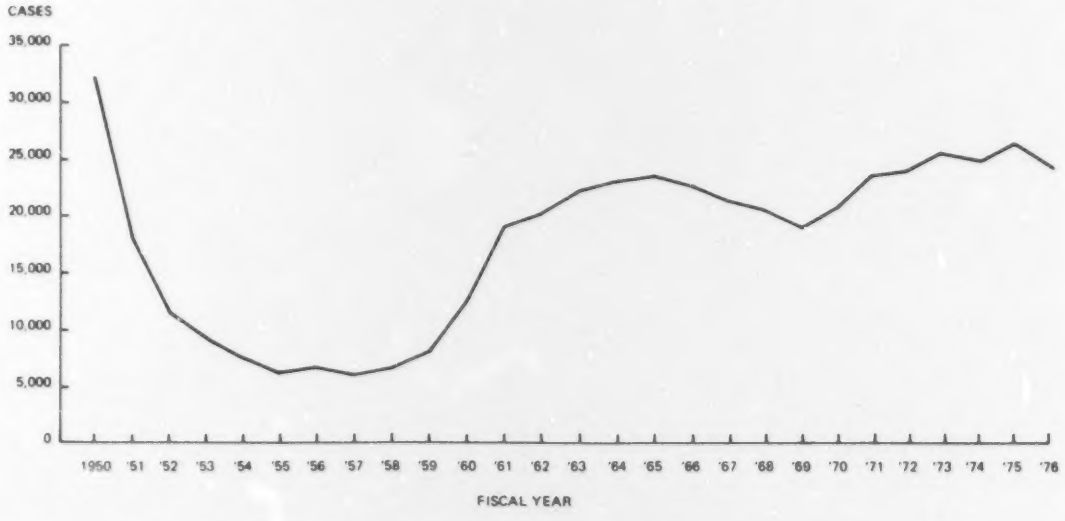
GONORRHEA
Reported Cases – United States: Fiscal Years 1950–1976

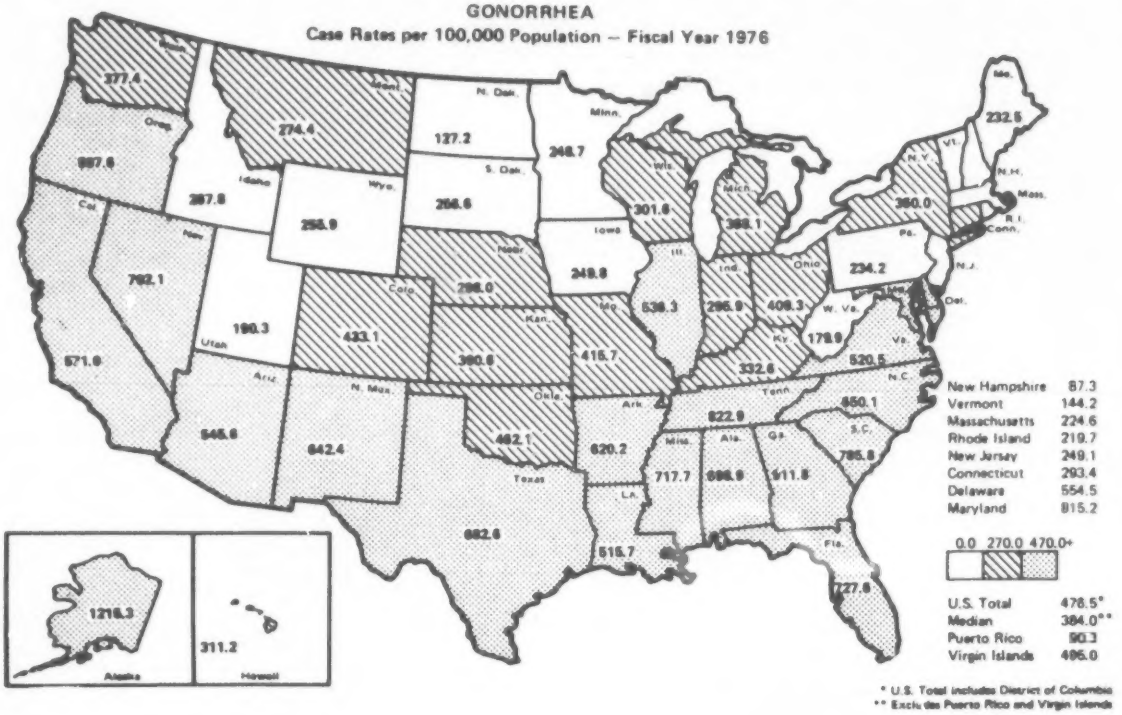


PRIMARY AND SECONDARY SYPHILIS
Reported Cases – United States: Fiscal Years 1950–1976



GONORRHEA

Case Rates per 100,000 Population — Fiscal Year 1976



New Hampshire	87.3
Vermont	144.2
Massachusetts	224.6
Rhode Island	219.7
New Jersey	249.1
Connecticut	293.4
Delaware	554.5
Maryland	815.2

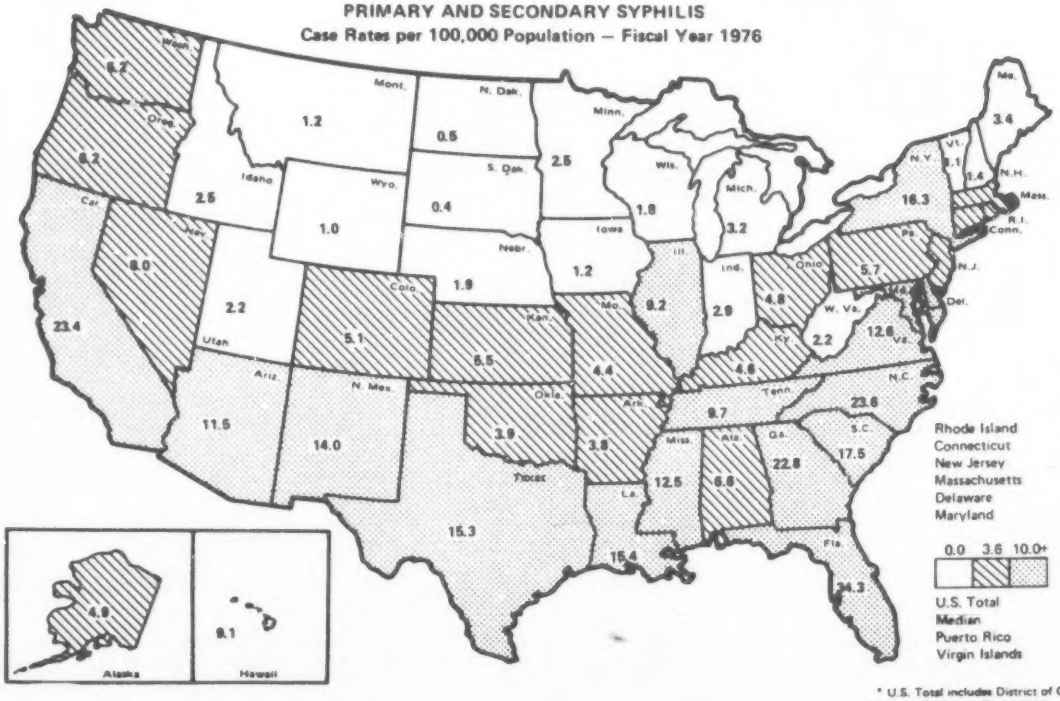
U.S. Total	478.5*
Median	384.0**
Puerto Rico	90.3
Virgin Islands	495.0

* U.S. Total includes District of Columbia

** Excludes Puerto Rico and Virgin Islands

PRIMARY AND SECONDARY SYPHILIS

Case Rates per 100,000 Population — Fiscal Year 1976



Rhode Island	3.7
Connecticut	5.5
New Jersey	8.6
Massachusetts	8.7
Delaware	12.4
Maryland	14.8

U.S. Total	11.8*
Median	5.4**
Puerto Rico	21.2
Virgin Islands	38.0

* U.S. Total includes District of Columbia

** Excludes Puerto Rico and Virgin Islands

CASES OF GONORRHEA REPORTED BY STATE AND OUTLYING AREA HEALTH DEPARTMENTS

By Sex, and Number of Male Cases per Each Female Case

Calendar Year 1975 and Calendar Year 1976

STATES BY HEW REGIONS	CALENDAR YEAR 1975			CALENDAR YEAR 1976		
	MALE	FEMALE	RATIO	MALE	FEMALE	RATIO
CONNECTICUT	5407	3788	1.43	5006	3822	1.31
MAINE	1061	1266	0.84	1041	1352	0.77
MASSACHUSETTS	7968	4914	1.62	8352	5060	1.65
NEW HAMPSHIRE	379	323	1.17	493	415	1.09
RHODE ISLAND	1336	812	1.65	1298	814	1.59
VERMONT	357	326	1.10	375	324	1.16
REGION 1 TOTAL	16508	11429	1.44	16525	11787	1.40
NEW JERSEY	11065	6196	1.79	10833	6888	1.57
NEW YORK	43656	25310	1.72	45245	24737	1.83
REGION 2 TOTAL	54721	31506	1.74	56078	31625	1.77
DELAWARE	1848	1488	1.24	1819	1590	1.14
MARYLAND	17450	13285	1.31	17102	14593	1.17
PENNSYLVANIA	16575	12421	1.33	15141	12778	1.18
VIRGINIA	12708	10791	1.18	13925	11714	1.19
WEST VIRGINIA	1740	1401	1.24	1763	1365	1.29
REGION 3 TOTAL 2	62814	44592	1.41	60765	47586	1.28
ALABAMA	11313	12273	0.92	11317	13098	0.86
FLORIDA	40916	24190	1.69	37816	21316	1.79
GEORGIA	30237	13984	2.24	31584	14725	2.14
KENTUCKY	6196	4796	1.29	6585	4893	1.35
MISSISSIPPI	9222	7290	1.27	9076	7535	1.20
NORTH CAROLINA	19621	14549	1.35	18999	16465	1.15
SOUTH CAROLINA	11893	9766	1.22	13544	9662	1.40
TENNESSEE	17339	19718	1.10	18350	16907	1.09
REGION 4 TOTAL	146735	102086	1.44	147271	104601	1.41
ILLINOIS	37900	20550	1.84	34394	19914	1.77
INDIANA	8919	6542	1.36	9161	6510	1.41
MICHIGAN	18675	13908	1.34	19974	14862	1.34
MINNESOTA	4956	5080	0.98	4896	4327	1.13
OHIO	23578	22742	1.04	20562	18496	1.10
WISCONSIN	7045	6644	1.06	7381	6628	1.11
REGION 5 TOTAL	101073	75486	1.34	96366	70437	1.37
ARKANSAS	7967	5604	1.47	7183	4848	1.47
LOUISIANA	10690	9839	1.09	10750	7538	1.43
NEW MEXICO	4398	2364	1.86	4491	2663	1.69
OKLAHOMA	6213	5937	1.05	6402	5851	1.09
TEXAS	49152	27336	1.80	52568	29736	1.77
REGION 6 TOTAL	78420	50678	1.54	81314	50636	1.61
*IOWA	3792	3679	1.09	3586	3020	1.16
KANSAS	4564	4489	1.02	4725	4351	1.09
MISSOURI	12624	5724	2.21	14046	7001	2.01
NEBRASKA	2366	2157	1.10	2251	1841	1.22
REGION 7 TOTAL	23346	15869	1.47	24528	16213	1.51
COLORADO	5671	5017	1.13	5674	4746	1.20
MONTANA	1065	1021	1.04	1029	999	1.03
NORTH DAKOTA	437	338	1.29	429	436	0.98
SOUTH DAKOTA	1013	920	1.10	841	732	1.15
UTAH	1418	1093	1.30	1351	1006	1.34
WYOMING	521	501	1.04	482	360	1.34
REGION 8 TOTAL	10125	8890	1.14	9806	8279	1.18
ARIZONA	6892	5006	1.38	7094	5146	1.38
CALIFORNIA	73014	42821	1.71	76708	42534	1.80
HAWAII	1161	1121	1.04	1595	1213	1.28
NEVADA	2921	1642	1.78	2440	1511	1.61
REGION 9 TOTAL	83988	50590	1.66	87797	50404	1.74
ALASKA	2213	1501	1.47	2534	1808	1.40
IDAHO	1085	1003	1.08	1141	1059	1.08
OREGON	5753	5695	1.01	5619	5383	1.04
WASHINGTON	6973	6678	1.04	6869	5763	1.19
REGION 10 TOTAL	16024	14877	1.08	16163	14013	1.15
U.S. TOTAL 2	593754	406183	1.46	596613	405381	1.47
CANAL ZONE	25	12	2.08	28	8	2.50
GUAM	20	36	0.56	32	23	1.39
PUERTO RICO	2191	721	3.04	2032	671	3.03
VIRGIN ISLANDS	312	297	1.05	218	225	0.93
OUTLYING AREAS	2548	1086	2.39	2295	927	2.47
U.S. & OUT 2	596302	407269	1.46	598907	406308	1.47

CASES OF GONORRHEA REPORTED BY CITIES WITH POPULATION 200,000 AND OVER

By Sex, and Number of Male Cases per Each Female Case

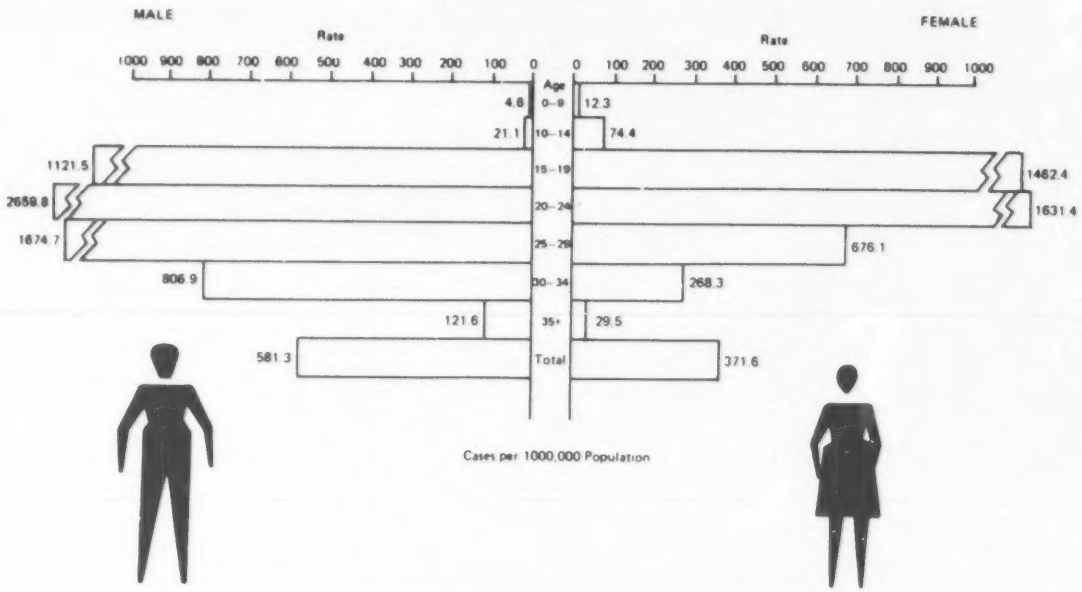
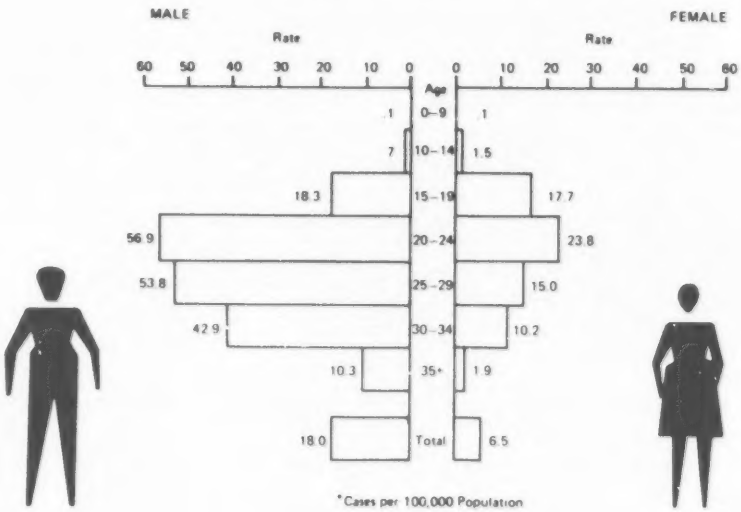
Calendar Year 1975 and Calendar Year 1976

CITIES BY HEW REGIONS	CALENDAR YEAR 1975			CALENDAR YEAR 1976		
	MALE	FEMALE	RATIO	MALE	FEMALE	RATIO
BOSTON	4093	2898	1.41	4171	2765	1.51
REG 1 CITY TOT	4093	2898	1.41	4171	2765	1.51
BUFFALO	1901	1691	1.12	1817	1464	1.24
JERSEY CITY	621	282	2.20	621	307	2.02
NEWARK	3607	1524	2.37	3375	2003	1.68
NEW YORK	31967	15932	2.00	34095	16160	2.11
ROCHESTER	2469	2397	1.03	2172	1929	1.13
YONKERS	172	49	3.51	142	36	3.94
REG 2 CITY TOT	40677	21875	1.86	42222	21899	1.93
BALTIMORE	13461	9690	1.39	13121	10625	1.23
NORFOLK	2619	2008	1.20	2570	2232	1.15
PHILADELPHIA	9727	5162	1.88	8764	6600	1.33
PITTSBURGH 2	2440	2619	0.93	2396	2403	0.97
RICHMOND	2771	2096	1.32	2836	1843	1.54
WASH., D.C.	12493	5206	2.40	11015	5566	1.99
REG 3 CITY TOT	43311	26771	1.62	40642	29269	1.39
ATLANTA 2	13923	5166	2.70	13586	5789	2.35
BIRMINGHAM 2	3462	3680	0.94	3476	4056	0.86
CHARLOTTE	3905	1246	3.13	2754	1546	1.78
JACKSONVILLE	5465	1381	3.96	3812	1772	2.15
LOUISVILLE 2	3695	2408	1.53	3988	2376	1.68
MEMPHIS 2	7708	7043	1.09	8222	7721	1.06
MIAMI 2	9606	6304	1.52	9369	4877	1.92
NASHVILLE 2	2884	2368	1.22	3915	2641	1.26
ST. PTRSBURG 2	1498	1064	1.41	1691	1357	1.25
TAMPA 2	3879	1990	1.95	3880	1946	1.99
REG 4 CITY TOT	56025	32650	1.72	54093	34081	1.59
AKRON	1507	1912	0.79	1279	1288	0.99
CHICAGO	25851	12075	2.14	22442	10884	2.06
CINCINNATI	2158	1160	1.86	2360	1672	1.60
CLEVELAND	5035	4974	1.01	4837	4364	1.11
COLUMBUS	3773	3970	0.95	3572	3463	1.03
DAYTON	1951	2248	0.87	1889	1763	1.07
DETROIT	6667	4275	1.56	7520	4728	1.59
INDIANAPOLIS 2	3405	3108	1.10	3384	3011	1.12
MILWAUKEE	4770	4404	1.08	5078	4171	1.22
MINNEAPOLIS 2	2780	2924	0.95	2705	2488	1.09
ST. PAUL	1055	1131	0.93	973	861	1.13
TOLEDO	1331	2057	0.65	1338	1527	0.88
REG 5 CITY TOT	60283	46238	1.30	57377	40120	1.43
ALBUQUERQUE 2	1756	1263	1.39	1911	1370	1.39
AUSTIN 2	2531	1783	1.42	2309	1722	1.34
CORP CHRISTI 2	790	371	2.13	911	378	2.41
DALLAS 2	12286	6315	1.95	12879	7670	1.68
EL PASO 2	1154	506	2.28	1263	520	2.43
FORT WORTH 2	3630	2391	1.52	3432	2281	1.50
HOUSTON 2	15174	6204	2.45	17550	6670	2.63
NEW ORLEANS	4501	3109	1.45	4637	2014	2.30
OKLAHOMA CITY	1903	1916	0.99	1879	1894	0.99
SAN ANTONIO 2	1988	1329	1.50	2604	1719	1.51
TULSA	1588	1347	1.18	1671	1433	1.17
REG 6 CITY TOT	47299	26534	1.78	51066	27671	1.84
*DES MOINES	894	777	1.15	813	637	1.28
KANSAS CITY	3321	1645	2.02	3697	2180	1.70
OMAHA 2	1655	1353	1.08	1482	1260	1.18
ST. LOUIS	5683	1875	3.03	6478	2397	2.70
WICHITA 2	1223	1432	0.85	1280	1315	0.97
REG 7 CITY TOT	12576	7082	1.78	13750	7789	1.77
DENVER	3201	2602	1.23	2909	2235	1.30
REG 8 CITY TOT	3201	2602	1.23	2909	2235	1.30
HONOLULU	815	704	1.16	1112	761	1.46
LOS ANGELES 2	25913	15839	1.64	20340	17283	1.64
OAKLAND 2	3159	2491	1.27	3061	2187	1.40
PHOENIX 2	3755	2753	1.36	3835	2853	1.34
SACRAMENTO 2	2377	1860	1.28	2559	1892	1.35
SAN DIEGO 2	4119	2641	1.56	3972	2464	1.61
SAN FRANCISCO	13160	2874	4.58	14407	2648	5.44
SAN JOSE 2	2752	2134	1.29	2717	1944	1.38
TUCSON 2	1082	970	1.12	1172	998	1.17
REG 9 CITY TOT	57132	32266	1.77	61175	33070	1.85
PORTLAND 2	2323	2164	1.07	2450	2124	1.15
SEATTLE 2	3311	2877	1.15	3396	2456	1.38
REG 10 CITY TOT	5634	5041	1.12	5846	4578	1.28
U.S. CITY TOTAL	330231	231957	1.66	333231	233457	1.66
SAN JUAN 2	1730	456	3.77	1630	416	3.66
U.S. CITY & OUT	331961	232411	1.66	334861	233873	1.66

SOURCE: FORM CDC 9.688
HEW-PHS-CDC-BSS-40 CONTROL DIVISION
EVALUATION AND STATISTICAL SERVICES SECTION

1 NUMBER OF MALE CASES REPORTED PER EACH FEMALE CASE.

GONORRHEA–AGE-SPECIFIC CASE RATES* BY SEX – UNITED STATES
Calendar Year 1975



PRIMARY AND SECONDARY SYPHILIS–AGE-SPECIFIC CASE RATES* BY SEX – UNITED STATES
Calendar Year 1975